User Guide for Assessing the Components of the MUSIC® Model of Motivation

by Brett D. Jones

Note: This guide is updated regularly to reflect the most current research available.

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Introduction

What is included in this User Guide?

This guide contains the instructions, items, and scoring instructions for many versions of the *MUSIC®️ Model of Motivation Inventory* (referred to in this guide as the *MUSIC Inventory*). In addition, this guide contains some open-ended items and interview questions that have been used to assess perceptions of the MUSIC components. The MUSIC Inventory was developed by Dr. Brett Jones to measure constructs related to the five primary components of the MUSIC®️ Model of Motivation (Jones, 2009, 2018).

This guide also includes a few other scales and items that are sometimes used in combination with the MUSIC Inventory, including: students' perceived effort, ease of course, overall course rating, and overall instructor rating.

What is the MUSIC®️ Model of Motivation?

The MUSIC Model of Motivation (Jones, 2009, 2018) is a model that can be used in *any* subject area at any grade level (a) to **design instruction** that motivates students, (b) to **diagnose** motivational strengths and weakness of instruction, and (c) to **research relationships** among factors critical to student motivation. The five key principles of the model are as follows. "The instructor needs to ensure that students:
1. feel <u>empowered</u> by having the ability to make decisions about some aspects of their learning,
2. understand why what they are learning is <u>useful</u> for their short- or long-term goals,
3. believe that they can <u>succeed</u> if they put forth the effort required,
4. are <u>interested</u> in the content and instructional activities, and
5. believe that others in the learning environment, such as the instructor and other students, <u>care</u> about their learning and about them as a person" (Jones, 2018, p. 9).

MUSIC is an acronym to help you remember the beginning sounds of these five key principles: **eMpowerment**, **Usefulness**, **Success**, **Interest**, and **Caring**.

This is only a very brief summary of the model; for more information, please read:

- This **free online journal article**: Jones, B. D. (2009). Motivating students to engage in learning: The MUSIC Model of Academic Motivation. *International Journal of Teaching and Learning in Higher Education, 21*(2), 272-285.
    - http://www.isetl.org/ijtlhe/pdf/IJTLHE774.pdf

- This **book**: Jones, B. D. (2018). *Motivating students by design: Practical strategies for professors* (2nd ed.). Charleston, SC: CreateSpace.
    - http://tinyurl.com/motivatingstudentsbydesign2e

- The **MUSIC model website**: www.theMUSICmodel.com

When citing the MUSIC Model of Motivation, please cite Jones (2009) and Jones (2018) as shown above.

Why is the MUSIC® Inventory needed?

Although researchers have used other scales to measure constructs similar to those in the MUSIC model, few of these scales have been validated through the use of rigorous empirical evidence and there are no other existing scales that measure all five MUSIC constructs with a consistent Likert-format scale with the same descriptors at each point. To address these problems and others, the MUSIC Inventory was developed by Brett Jones to ensure that the items and scales for each MUSIC component would be similar in format and provide valid scores.

Information About the MUSIC® Inventory

What versions of the MUSIC® Inventory are available?

Dr. Jones developed the College Student version of the MUSIC Inventory first and then created the other versions. Since then, the MUSIC Inventory has been translated to many different languages. Most of the inventory versions are included in this guide, but others may not be included yet because they are still under construction. Please contact Brett Jones (brettdjones@gmail.com) for up-to-date information on other versions. Other versions of the MUSIC Inventory in this guide include:

- The Professor version of the MUSIC Inventory, which was published in the book *Motivating Students by Design* (Jones, 2018). This inventory can be completed by teachers to assess their own perceptions of their instruction.

- The Cognitive Training version, which can be used by in clinics that deliver cognitive training services.

Some versions of the inventory have been examined for validity more rigorously than others, so please read the instructions in this guide related to each version for the validity evidence available at this time. Research is ongoing with all of these versions in English and in other languages.

Can I use the MUSIC® Inventory for my research or to evaluate my instruction?

If you publish your results in journal articles, books, presentations, websites, etc. you may use the MUSIC Inventory for non-commercial research and teaching purposes as long as you: (1) obtain the written permission of Brett Jones by emailing him (brettdjones@gmail.com), and (2) provide the reference to the MUSIC® Model of Motivation (Jones, 2009, 2018) and the MUSIC® Model of Academic Motivation Inventory (Jones, 2020, September). The ® at the end of MUSIC® indicates that it is a registered trademark of Brett D. Jones, all rights reserved. Please note this in your use of the MUSIC® Inventory as well.

If you are using your results for your own instructional purposes, there is no need to cite anything, simply use the inventories as needed after you receive permission. It is not acceptable to use the MUSIC Inventory for commercial purposes (that is, for monetary gain on your own account or on that of a third party, or for indirect financial gain by a commercial entity). Dr. Jones has never sold any version of the MUSIC Inventory, they are all available for free because he wants to help others improve teaching at all levels.

How do I cite the MUSIC® Model and Inventory in my publications and presentations?

The MUSIC Model and the Inventory are cited differently, as described here.

- **Cite the MUSIC® Model of Motivation** with these two references (Jones, 2009, 2018):
  - Jones, B. D. (2009). Motivating students to engage in learning: The MUSIC Model of Academic Motivation. *International Journal of Teaching and Learning in Higher Education, 21*(2), 272-285.
    - http://www.isetl.org/ijtlhe/pdf/IJTLHE774.pdf

  - Jones, B. D. (2018). *Motivating students by design: Practical strategies for professors* (2nd ed.). Charleston, SC: CreateSpace.
    - http://tinyurl.com/motivatingstudentsbydesign2e

- **Cite the MUSIC® Model of Academic Motivation Inventory** with this reference (Jones, 2020):
  - Jones, B. D. (2020, September). *User guide for assessing the components of the MUSIC® Model of Motivation*. Retrieved from http://www.theMUSICmodel.com

What does the MUSIC® Inventory measure?

The MUSIC Inventory measures the five primary components of the MUSIC Model of Motivation: empowerment, usefulness, success, interest, and caring. The components of the MUSIC model are not directly related to any one specific construct because they are names of categories of teaching strategies that can be used to motivate students. For example, the *Interest* component of the model refers to teaching strategies that can be used to interest students. However, to measure students' perceptions of the components, it becomes necessary to either create a new construct or to align each category with a construct that is well-known in the fields of educational psychology and motivation science. Because the field of motivation already has many constructs, Dr. Jones chose to align each MUSIC Inventory scale with an existing motivation construct, as closely as possible. The definitions for each of the MUSIC model constructs in the MUSIC Inventory and the related constructs are provided in Table 1.

Table 1. *The MUSIC Inventory Constructs and Their Definitions*

MUSIC model constructs	Definitions The degree to which a student perceives that:	Related constructs
Empowerment	he or she has control of his or her learning environment in the course	Autonomy (Deci & Ryan, 1991)
Usefulness	the coursework is useful to his or her future	Utility value (Wigfield & Eccles, 2000)
Success	he or she can succeed at the coursework	Expectancy for success (Wigfield & Eccles, 2000)
Interest	the instructional methods and coursework are interesting	Situational interest (Hidi & Renninger, 2006)
Caring	the instructor cares about whether the student succeeds in the coursework and cares about the student's well-being	Caring (Noddings, 1992)

Please note that although the MUSIC *Inventory* aligns with these constructs, the teaching strategies associated with the MUSIC Model of Motivation are not limited to these constructs or associated theories. As explained in Jones (2018, p. 195-196), the five MUSIC model components are groups of strategies that are based on many different theories, including (but not limited to) to the following:

- arousal theories (Berlyne, 1960; Duffy, 1957),
- attachment theory (Ainsworth, 1979; Bowlby, 1969),
- attribution theory (Weiner, 1986; 2000),
- behaviorist theories (Skinner, 1953; Skinner & Epstein, 1982),
- belonging theories (Baumeister & Leary, 1995; Goodenow, 1993),
- caring theories (Johnson, Johnson, & Anderson, 1983; Noddings, 1984, 1992; Wentzel, 1999),
- competence theories (Elliot & Dweck, 2005; Harter, 1978; White, 1959),
- domain identification theory (Osborne & Jones, 2011)
- emotion theories (Pekrun, 2009),
- expectancy-value theory (Eccles et al., 1983; Wigfield & Eccles, 2000);
- flow theory (Csikszentmihalyi, 1990),
- future time perspective theory (Lens, 1988; Lewin, 1942; Nuttin & Lens, 1985)
- goal orientation theories (Ames, 1992; Elliot, 1999; Maehr & Midgley, 1991; Nicholls, 1984),
- goal setting theories (Locke & Latham, 2002)
- goal theories (Ford, 1992; Locke & Latham, 2002),
- identity and identification theories (Finn, 1989; James, 1890/1981; Voelkl, 1997),
- interest theories (Hidi & Renninger, 2006; Krapp, 2005; Schraw & Lehman, 2001),
- locus of control (deCharms, 1968, 1976)
- rewards and intrinsic/extrinsic motivation theories (Cameron & Pierce, 1994; Deci, 1975; Deci, Koestner, & Ryan, 1999; Deci & Ryan, 1985),
- self-concept theories (Marsh, 1990; Shavelson & Bolus, 1982),
- self-determination theory (Deci & Ryan, 1985, 2000),
- self-efficacy theory (Bandura, 1977, 1986, 1997; Pajares, 1996),
- self-esteem theories (Rosenberg, 1979),
- self-regulation theories (Bandura, 1986; Pintrich & de Groot, 1990; Zimmerman, 2000),
- self-theories of intelligence (Dweck, 1999, 2006; Mueller & Dweck, 1998);
- self-worth theories (Covington, 1992),
- social cognitive theory (Bandura, 1986, 1997), and
- stereotype theories (Aronson & Steele, 2005).

What are the MUSIC® constructs related to?

The MUSIC constructs have been shown to be related to students' motivation, engagement, identification with a domain, career goals, course ratings, and instructor ratings. Over the past several decades, researchers have provided documentation of these relationships for one or more of the MUSIC constructs. More recently, Dr. Jones and his MUSIC Model Lab associates have conducted studies using all five of the MUSIC model components in the same study to examine the relationships when all five components are included in one study. It is beyond the scope of this document to explain the results of these studies, but some representative studies that included all five MUSIC model components in one study are listed here.

- Jones, B. D. (2020). Testing the MUSIC Model of Motivation Theory: Relationships between students' perceptions, engagement, and overall ratings. *The Canadian Journal for the Scholarship of Teaching and Learning*.

- Jones, B. D., & Carter, D. (2019). Relationships between students' course perceptions, engagement, and learning. *Social Psychology of Education: An International Journal, 22*, 819-839. doi:10.1007/s11218-019-09500-x
- Chittum, J. R., Jones, B. D., & Carter, D. M. (2019). A person-centered investigation of patterns in college students' perceptions of motivation in a course. *Learning and Individual Differences, 69*, 94-107. doi:10.1016/j.lindif.2018.11.007
- Chittum, J. R., Jones, B. D., Akalin, S., & Schram, A. B. (2017). The effects of an afterschool STEM program on students' motivation and engagement. *International Journal of STEM Education, 4*(11), 1-16. doi:10.1186/s40594-017-0065-4
- Chittum, J. R., & Jones, B. D. (2017). Identifying pre-high school students' science class motivation profiles to increase their science identification and persistence. *Journal of Educational Psychology, 109*(8), 1163-1187. doi:10.1037/edu0000176
- Jones, B. D., Sahbaz, S., Schram, A. B., & Chittum, J. R. (2017). Using psychological constructs from the MUSIC Model of Motivation to predict students' science identification and career goals: Results from the U.S. and Iceland. *International Journal of Science Education, 39*(8), 1089-1108. doi:10.1080/09500693.2017.1319093
- Jones, B. D., & Skaggs, G. E. (2016). Measuring students' motivation: Validity evidence for the MUSIC Model of Academic Motivation Inventory. *International Journal for the Scholarship of Teaching and Learning, 10*(1). Retrieved from http://digitalcommons.georgiasouthern.edu/ij-sotl/vol10/iss1/7
- Jones, B. D., Tendhar, C., & Paretti, M. C. (2016). The effects of students' course perceptions on their domain identification, motivational beliefs, and goals. *Journal of Career Development, 43*(5), 383-397. doi:10.1177/0894845315603821
- Jones, B. D., Chittum, J. R., Akalin, S., Schram, A. B., Fink, J., Schnittka, C.,…Brandt, C. (2015). Elements of design-based science activities that affect students' motivation. *School Science and Mathematics, 115*(8), 404-415. doi:10.1111/ssm.12143
- Jones, B. D., Ruff, C., & Osborne, J. W. (2015). Fostering students' identification with mathematics and science. In K. A. Renninger, M. Nieswandt, & S. Hidi (Eds.), *Interest in mathematics and science learning* (pp. 331-352). Washington, DC: American Educational Research Association. doi: 10.3102/978-0-935302-42-4_19
- Jones, B. D., Osborne, J. W., Paretti, M. C., & Matusovich, H. M., (2014). Relationships among students' perceptions of a first-year engineering design course and their engineering identification, motivational beliefs, course effort, and academic outcomes. *International Journal of Engineering Education, 30*(6A), 1340-1356.
- Jones, B. D., Epler, C. M., Mokri, P., Bryant, L. H., & Paretti, M. C. (2013). The effects of a collaborative problem-based learning experience on students' motivation in engineering capstone courses. *Interdisciplinary Journal of Problem-based Learning, 7*(2), 34-71. doi:10.7771/1541-5015.1344
- Jones, B. D., Watson, J. M., Rakes, L., & Akalin, S. (2012). Factors that impact students' motivation in an online course: Using the MUSIC Model of Academic Motivation. *Journal of Teaching and Learning with Technology, 1*(1), 42-58.
- Jones, B. D. (2010). An examination of motivation model components in face-to-face and online instruction. *Electronic Journal of Research in Educational Psychology, 8*(3), 915-944.

MUSIC® Inventory (College Student version)

Purpose

The purpose of the College Student version of the MUSIC Inventory is to measure the extent to which college students perceive the presence of each of the MUSIC model components in a college course. It can be used by professors to help them identify areas of strengths and weaknesses related to factors that affect students' motivation and engagement.

Instructions for Administering the College Student version of the MUSIC Inventory

- **Title the inventory as general as possible**, such as "Course Questionnaire" or "Course Survey" or "Course Feedback," and avoid using words such as "motivation" or something similar that could affect students' responses because of their preconceived notions of this word. Also, delete the text above the word "Instructions" in the examples on the following pages.
- Use the following instructions:

> **INSTRUCTIONS**
>
> The items that refer to a course or instructor refer to this course and your primary instructor.
>
> Also note that the word **"coursework"** refers to anything that you did in this course, including assignments, activities, readings, etc.
>
> There are no right or wrong answers for these questions. Please answer them honestly. Some of the questions might seem repetitive, but it is important that you answer them all to obtain the best possible results.

- **Order the items randomly**. The versions in this guide are already ordered randomly and can be used in the order shown. But if you administer the inventory online and your online survey software has the feature, I recommend that you have the software randomize the questions differently for each student.
- For the 1 to 6 rating scale, **provide each number** along with the associated description (e.g., 1 = *disagree*). The scale is presented correctly in this guide.
- It is possible to use the **present-tense version** of the inventory at any time in the course; however, the items can be worded in the past tense when the inventory is administered near the end of a course. Both of these versions are presented on the following pages for the college version.
- To assess students' perceptions at the **"major" or "program" level** (as opposed to at the "course" level), items have been changed as shown in the third version below.
- **Do not interpret any of the items** for the students, they must make their own interpretation of the items. If they ask you what an item means, say something like: "Answer it based on whatever you think it means."
- The wording could be changed to **focus on a particular activity** within a class by changing the words "course" and "coursework" to "activity."

- Typically, responses have been collected through online survey software (e.g., Survey Monkey, Qualtrics); however, it is possible to administer the inventory on paper. Studies have not been conducted to determine how the format of the items (online versus paper) affects students' responses. Avoid displaying the numbers and labels in ways that present them as different distances apart because the distance between the items is assumed to be equal (e.g., the distance from 1 to 2 is assumed to be the same as the distance from 4 to 5). As an example, when spaced horizontally, avoid having the spacing width of the option for "1 = Strongly Disagree" larger than the width for the option for "2 = Disagree" because there are more letters in the "Strongly Disagree" label. Make the column widths for the options the same. I recommend avoiding this issue by **presenting the options vertically** as shown here because the distance between the rows is equal.

The instructor is respectful of me.

○ 1 = Strongly Disagree

○ 2 = Disagree

○ 3 = Somewhat Disagree

○ 4 = Somewhat Agree

○ 5 = Agree

○ 6 = Strongly Agree

Validity Evidence

The validity evidence for the use of this version of the MUSIC Inventory with **college students** is very good, if not excellent, as is shown by the results of several studies with college students (the interpretations of the Cronbach alpha values are based on Kline's [2005] criteria).

- Jones (2019) used the inventory with 285 students from eight different college courses that included these topics: biological systems engineering, community systems thinking, educational psychology, environmental science, geography, human development, mathematics, and neuroscience. Almost all (37 of the 40) of the Cronbach's alpha values calculated (8 courses times five MUSIC constructs equals 40 alpha values) were excellent (greater than 0.9) or good (between 0.7 and 0.9), two were acceptable (0.62 and 0.67), and only one was unacceptable (0.57).
- Chittum, Jones, and Carter (2019) analyzed the data from 552 students in an undergraduate college course and reported consistently high Cronbach's alpha values of .83 for empowerment, .87 for usefulness, .86 for success, .87 for interest, and .82 for caring. They conducted an exploratory factor analysis with 200 students and a confirmatory factor analysis with the other 352 students to provide evidence of the five-factor structure of the MUSIC model. They also provided evidence for predictive validity by demonstrating that the MUSIC components were positively related to students' effort and cognitive engagement.
- Tendhar, Singh, and Jones (2017) used the inventory with 812 undergraduate engineering students and obtained Cronbach's alpha values of .90 empowerment, .94 for usefulness, .89 for success, .93 for interest, and .91 for caring. Confirmatory factor analysis produced fit indices within acceptable ranges.
- Jones and Skaggs (2016) used the inventory with 338 students from 221 different face-to-face, online, and hybrid (face-to-face and online) courses and reported excellent Cronbach's alpha values of .91 for empowerment, .96 for usefulness, .93 for success, .95 for interest,

and .93 for caring. Confirmatory factor analysis showed that the five-factor model fit the data well, as demonstrated by acceptable fit indices.

The validity evidence for the use of this version of the MUSIC Inventory with **professional students** is very good, if not excellent, as is shown by the results of several studies with medial students, veterinary medicine students, and pharmacy students (the interpretations of the Cronbach alpha values are based on Kline's [2005] criteria).

- Gladman, Gallagher, and Ali (2020) assessed the validity of the inventory with 152 medical students. Internal reliability estimates were good to excellent (α = .87 to .92) and the Rasch analysis indicated that the five factors accounted for the response patterns in the data.
- Jones, Byrnes, and Jones (2019) provided validation evidence for the use of the inventory with 578 veterinary medicine students. All of the Cronbach alpha values were good or excellent and the confirmatory factor analyses produced fit indices and factor loadings within acceptable ranges.
- Pace, Ham, Poole, and Wahaib (2016) provided validation evidence for the use of the inventory with 154 student pharmacists. They reported excellent Cronbach's alpha values of .89 for empowerment, .91 for usefulness, .92 for success, .91 for interest, and .92 for caring. They conducted an exploratory factor analysis and identified the five-factor structure of the MUSIC components as expected.

The inventories are provided on the following pages (also note that there is a short-form version provided on the "Instructions for Scoring" page).

(to be administered near the <u>beginning or middle</u> of a course, although it can be used at the end)

Instructions

Please rate the items in this section using the following scale:

1	2	3	4	5	6
Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree

Note that the word "coursework" refers to anything that you do in the course, including assignments, activities, readings, etc.

_____ 1. The coursework holds my attention.

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

_____ 3. In general, the coursework is useful to me.

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

_____ 5. The coursework is beneficial to me.

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

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

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

_____ 9. I enjoy the instructional methods used in this course.

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

_____ 11. The instructional methods engage me in the course.

_____ 12. I have options in how to achieve the goals of the course.

_____ 13. I enjoy completing the coursework.

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

_____ 15. The coursework is interesting to me.

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

_____ 17. I have control over how I learn the course content.

_____ 18. Throughout the course, I have felt that I could be successful on the coursework.

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

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

_____ 21. I will be able to use the knowledge I gain in this course.

_____ 22. The instructor is respectful of me.

_____ 23. The knowledge I gain in this course is important for my future.

_____ 24. The instructor is friendly.

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

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

MUSIC Inventory (College Student version, past tense)
(can be administered near the <u>end</u> of a course, or the present tense version can be used)

Instructions

Please rate the items in this section using the following scale:

1 Strongly disagree	2 Disagree	3 Somewhat disagree	4 Somewhat agree	5 Agree	6 Strongly agree

Note that the word "coursework" refers to anything that you did in the course, including assignments, activities, readings, etc.

_____ 1. The coursework held my attention.

_____ 2. I had the opportunity to decide for myself how to meet the course goals.

_____ 3. In general, the coursework was useful to me.

_____ 4. The instructor was available to answer my questions about the coursework.

_____ 5. The coursework was beneficial to me.

_____ 6. The instructional methods used in this course held my attention.

_____ 7. I was confident that I could succeed in the coursework.

_____ 8. I had the freedom to complete the coursework my own way.

_____ 9. I enjoyed the instructional methods used in this course.

_____ 10. I felt that I could be successful in meeting the academic challenges in this course.

_____ 11. The instructional methods engaged me in the course.

_____ 12. I had options in how to achieve the goals of the course.

_____ 13. I enjoyed completing the coursework.

_____ 14. I was capable of getting a high grade in this course.

_____ 15. The coursework was interesting to me.

_____ 16. The instructor was willing to assist me if I needed help in the course.

_____ 17. I had control over how I learned the course content.

_____ 18. Throughout the course, I felt that I could be successful on the coursework.

_____ 19. I found the coursework to be relevant to my future.

_____ 20. The instructor cared about how well I did in this course.

_____ 21. I will be able to use the knowledge I gained in this course.

_____ 22. The instructor was respectful of me.

_____ 23. The knowledge I gained in this course is important for my future.

_____ 24. The instructor was friendly.

_____ 25. I believe that the instructor cared about my feelings.

_____ 26. I had flexibility in what I was allowed to do in this course.

MUSIC Inventory (College Student version, present tense, major/program level)
(to be administered while the student is enrolled in college)

Instructions
Please rate the items in this section using the following scale:

1	2	3	4	5	6
Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree

Thinking about the [insert name of major or program] courses you have taken and are currently taking in your academic major (i.e., [insert specific majors]), please rate your level of agreement or disagreement with the following statements:

_____ 1. The coursework holds my attention.

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

_____ 3. In general, the coursework is useful to me.

_____ 4. The instructors are available to answer my questions about the coursework.

_____ 5. The coursework is beneficial to me.

_____ 6. The instructional methods used in the courses hold my attention.

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

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

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

_____ 10. I feel that I can be successful in meeting the academic challenges in the courses.

_____ 11. The instructional methods engage me in the courses.

_____ 12. I have options in how to achieve the goals of the courses.

_____ 13. I enjoy completing the coursework.

_____ 14. I am capable of getting a high grade in the courses.

_____ 15. The coursework is interesting to me.

_____ 16. The instructors are willing to assist me if I need help in a course.

_____ 17. I have control over how I learn the course content.

_____ 18. Throughout the courses, I have felt that I could be successful on the coursework.

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

_____ 20. The instructors care about how well I do in their courses.

_____ 21. I will be able to use the knowledge I gain in the courses.

_____ 22. The instructors are respectful of me.

_____ 23. The knowledge I gain in the courses is important for my future.

_____ 24. The instructors are friendly.

_____ 25. I believe that the instructors care about my feelings.

_____ 26. I have flexibility in what I am allowed to do in the courses.

Instructions for Scoring the MUSIC Inventory (College Student version)

To obtain a score for each scale, average the values for the items in the scales as shown below.

Empowerment score = (item 2 + item 8 + item 12 + item 17 + item 26) / 5
Usefulness score = (item 3 + item 5 + item 19 + item 21 + item 23) / 5
Success score = (item 7 + item 10 + item 14 + item 18) / 4
Interest score = (item 1 + item 6 + item 9 + item 11 + item 13 + item 15) / 6
Caring score = (item 4 + item 16 + item 20 + item 22 + item 24 + item 25) / 6

Other important notes:
- Do not sum or average all 26 items because this produces a meaningless value. It is inconsistent with the principles of the MUSIC model to assume that motivation is the sum of empowerment, usefulness, success, interest, and caring. Although this may be true in some cases, it is possible that a student is highly motivated and engaged when she is high on only one or two of the MUSIC components and low on the others.

Scales	Items by Scale (past-tense college version)
Empowerment	• I had the opportunity to decide for myself how to meet the course goals. • ** I had the freedom to complete the coursework my own way. • ** I had options in how to achieve the goals of the course. • ** I had control over how I learned the course content. • ** I had flexibility in what I was allowed to do in this course.
Usefulness	• ** In general, the coursework was useful to me. • ** The coursework was beneficial to me. • ** I found the coursework to be relevant to my future. • I will be able to use the knowledge I gained in this course. • ** The knowledge I gained in this course is important for my future.
Success	• ** I was confident that I could succeed in the coursework. • ** I felt that I could be successful in meeting the academic challenges in this course. • ** I was capable of getting a high grade in this course. • ** Throughout the course, I felt that I could be successful on the coursework.
Interest	• The coursework held my attention. • ** The instructional methods used in this course held my attention. • ** I enjoyed the instructional methods used in this course. • The instructional methods engaged me in the course. • ** I enjoyed completing the coursework. • ** The coursework was interesting to me.
Caring	• The instructor was available to answer my questions about the coursework. • ** The instructor was willing to assist me if I needed help in the course. • ** The instructor cared about how well I did in this course. • ** The instructor was respectful of me. • ** The instructor was friendly. • I believe that the instructor cared about my feelings.

** Items with the double asterisk (**) are part of the short-form version. Pilot testing indicates that they produce valid scores and further evaluation is ongoing.

MUSIC® Inventory (Professor version)

Purpose

The purpose of the Professor version of the MUSIC Inventory is to measure the extent to which professors believe that students perceive the presence of each of the MUSIC model components in a college course. The Professor version of the MUSIC Inventory is different from the College Student version of the inventory because it is **administered to the professor** instead of to the students (professors can administer it to themselves). I use the term "Professor" for this version as a broad term to include professors, teachers, lecturers, instructors, and anyone who designs and implements instruction for learners.

The Professor version can be used to identify areas of strengths and weaknesses related to factors that affect students' motivation and engagement. It is intended to be used as a reflection tool along with other sources of data, such as the College Student version of the MUSIC Inventory. The items are almost identical to the College Student version except I changed the wording to make them appropriate for a professor to answer.

Instructions for Administering the Professor version of the MUSIC Inventory

The instructions for this version are the same as the instructions provided above in the section titled "Instructions for Administering the College Student version of the MUSIC Inventory."

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).

The inventories are provided on the following pages (also note that there is a short-form version provided after the "Instructions for Scoring" page).

MUSIC Inventory (Professor version, present tense)
(to be administered near the <u>beginning or middle</u> of a course, although it can be used at the end)

Instructions

List a course for which you want to assess students' motivation: _____

Respond to the items below <u>in relation to this one course</u> using this scale:

1 Strongly disagree	2 Disagree	3 Somewhat disagree	4 Somewhat agree	5 Agree	6 Strongly agree

Note that the word "<u>coursework</u>" refers to anything that students do in the course, including assignments, activities, readings, etc.

Students believe that:

_____ 1. the coursework holds their attention.

_____ 2. they have the opportunity to decide for themselves how to meet the course goals.

_____ 3. in general, the coursework is useful to them.

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

_____ 5. the coursework is beneficial to them.

_____ 6. the instructional methods used in this course hold their attention.

_____ 7. they are confident that they can succeed in the coursework.

_____ 8. they have the freedom to complete the coursework their own way.

_____ 9. they enjoy the instructional methods used in this course.

_____ 10. they can be successful in meeting the academic challenges in this course.

_____ 11. the instructional methods engage them in the course.

_____ 12. they have options in how to achieve the goals of the course.

_____ 13. they enjoy completing the coursework.

_____ 14. they are capable of getting a high grade in this course.

_____ 15. the coursework is interesting.

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

_____ 17. they have control over how they learn the course content.

_____ 18. throughout the course, they could be successful on the coursework.

_____ 19. the coursework is relevant to their future.

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

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

_____ 22. I am respectful of them.

_____ 23. the knowledge they gain in this course is important for their future.

_____ 24. I am friendly.

_____ 25. I care about their feelings.

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

MUSIC Inventory (Professor version, past tense)
(can be administered near the <u>end</u> of a course, or the present tense version can be used)

Instructions

List a course for which you want to assess students' motivation: _____

Respond to the items below <u>in relation to this one course</u> using this scale:

1 Strongly disagree	2 Disagree	3 Somewhat disagree	4 Somewhat agree	5 Agree	6 Strongly agree

Note that the word "<u>coursework</u>" refers to anything that students do in the course, including assignments, activities, readings, etc.

Students believed that:

_____ 1. the coursework held their attention.

_____ 2. they had the opportunity to decide for themselves how to meet the course goals.

_____ 3. in general, the coursework was useful to them.

_____ 4. I was available to answer their questions about the coursework.

_____ 5. the coursework was beneficial to them.

_____ 6. the instructional methods used in this course held their attention.

_____ 7. they were confident that they could succeed in the coursework.

_____ 8. they had the freedom to complete the coursework their own way.

_____ 9. they enjoyed the instructional methods used in this course.

_____ 10. they could be successful in meeting the academic challenges in this course.

_____ 11. the instructional methods engaged them in the course.

_____ 12. they had options in how to achieve the goals of the course.

_____ 13. they enjoyed completing the coursework.

_____ 14. they were capable of getting a high grade in this course.

_____ 15. the coursework was interesting.

_____ 16. I was willing to assist them if they needed help in the course.

_____ 17. they had control over how they learned the course content.

_____ 18. throughout the course, they could be successful on the coursework.

_____ 19. the coursework was relevant to their future.

_____ 20. I cared about how well they did in this course.

_____ 21. they would be able to use the knowledge they gained in this course.

_____ 22. I was respectful of them.

_____ 23. the knowledge they gained in this course was important for their future.

_____ 24. I was friendly.

_____ 25. I cared about their feelings.

_____ 26. they had flexibility in what they were allowed to do in this course.

Instructions for Scoring the MUSIC Inventory (Professor version)

To obtain a score for each of the five scales, place the item numbers from the prior page onto the corresponding line below. Then, average the values for the items in each scale by adding the numbers and dividing by the total number of items in the scale as shown below.

(item 2 + item 8 + item 12 + item 17 + item 26) / 5

(_____ + _____ + _____ + _____ + _____) / 5 = _____ = **eMpowerment**

(item 3 + item 5 + item 19 + item 21 + item 23) / 5

(_____ + _____ + _____ + _____ + _____) / 5 = _____ = **Usefulness**

(item 7 + item 10 + item 14 + item 18) / 4

(_____ + _____ + _____ + _____) / 4 = _____ = **Success**

(item 1 + item 6 + item 9 + item 11 + item 13 + item 15) / 6

(_____ + _____ + _____ + _____ + _____ + _____) / 6 = _____ = **Interest**

(item 4 + item 16 + item 20 + item 22 + item 24 + item 25) / 6

(_____ + _____ + _____ + _____ + _____ + _____) / 6 = _____ = **Caring**

NOTE: Do not sum or average all 26 items because this produces a meaningless value. It's inconsistent with the principles of the MUSIC model to assume that motivation is the sum of empowerment, usefulness, success, interest, and caring. Although this may be true in some cases, it is possible that a student is highly motivated and engaged when only one or two of her MUSIC perceptions are high and the others are low.

Look at your scores for each MUSIC component. Higher numbers indicate that your instruction is more consistent with the strategies related to those MUSIC components. Lower numbers indicate that you may be able to implement more strategies consistent with those MUSIC components. These results cannot be interpreted precisely. Instead, they're intended to help you diagnose areas of possible strengths and weaknesses. So obviously, also use your beliefs about your instructional strengths and weaknesses related to students' MUSIC perceptions. To corroborate your beliefs, you can assess students' perceptions by asking students to complete the student version of the MUSIC Inventory available at www.theMUSICmodel.com.

A short-form Professor version is also available as shown in the table on the next page.

Jones, B. D. (2012/2020, September). *User guide for assessing the components of the MUSIC® Model of Motivation.* Retrieved from http://www.theMUSICmodel.com

MUSIC Inventory (short-form Professor version)

The instructions for this version and the directions for administering it are the same as the other Professor versions, including that the items should be ordered randomly.

Scales	Items by Scale **Students believe that:**
Empowerment	• they have the freedom to complete the coursework their own way. • they have options in how to achieve the goals of the course. • they have control over how they learn the course content. • they have flexibility in what they are allowed to do in this course.
Usefulness	• in general, the coursework is useful to them. • the coursework is beneficial to them. • the coursework is relevant to their future. • the knowledge they gain in this course is important for their future.
Success	• they are confident that they can succeed in the coursework. • they can be successful in meeting the academic challenges in this course. • they are capable of getting a high grade in this course. • throughout the course, they could be successful on the coursework.
Interest	• the instructional methods used in this course hold their attention. • they enjoy the instructional methods used in this course. • they enjoy completing the coursework. • the coursework is interesting.
Caring	• I am willing to assist them if they need help in the course. • I care about how well they do in this course. • I am respectful of them. • I am friendly.

MUSIC® Inventory (Middle/High School Student version)

Purpose

The purpose of the Middle/High School Student version of the MUSIC Inventory is to measure the extent to which middle or high school students perceive the presence of each of the MUSIC model components in a class or other learning environment. It can be used by teachers to help them identify areas of strengths and weaknesses related to factors that affect students' motivation and engagement.

I developed this version of the MUSIC Inventory by selecting items from the College Student version of the MUSIC Inventory that were most appropriate for middle and high school students. I made a few slight modifications to some of the items to make them more appropriate for this population, but they are very similar to the items in the College Student version.

Instructions for Administering the Middle/High School version of the MUSIC Inventory

- **Substitute the word "science"** with the subject area of the class to be surveyed (if it is not a science class).
- Title the inventory as general as possible, such as "Questions About Science Class," and delete the text above the word "Directions" in the examples on the following pages. Titling the inventory as "motivation" or something similar could affect students' responses because of their preconceived notions of this word.
- **Order the items randomly**. The versions in this guide are already ordered randomly and can be used in the order shown. But if you administer the inventory online and your online survey software has the feature, I recommend that you have the software randomize the questions differently for each student.
- For the 1 to 6 rating scale, **provide each number** along with the associated description (e.g., 1 = *disagree*). The scale is presented correctly in this guide.
- It is possible to use the **present-tense version** of the inventory at any time in the course; however, the items can be worded in the past tense when the inventory is administered near the end of a course. Both of these versions are presented on the following pages for the college version.
- **Do not interpret any of the items** for the students, they must make their own interpretation of the items. If they ask you what an item means, say something like: "Answer it based on whatever you think it means."
- Typically, responses have been collected on paper; however, it is possible to administer the inventory online. Studies have not been conducted to determine how the format of the items (online versus paper) affects students' responses. **If you administer the inventory online**, avoid displaying the numbers and labels in ways that present them as different distances apart because the distance between the items is assumed to be equal (e.g., the distance from 1 to 2 is assumed to be the same as the distance from 4 to 5). As an example, when spaced horizontally, avoid having the spacing width of the option for "1 = Strongly Disagree" larger than the width for the option for "2 = Disagree" because there are more letters in the "Strongly Disagree" label. Make the column widths for the options the same. I recommend avoiding this issue by presenting the options vertically as shown here because the distance between the rows is equal.

The instructor is respectful of me.

○ 1 = Strongly Disagree

○ 2 = Disagree

○ 3 = Somewhat Disagree

○ 4 = Somewhat Agree

○ 5 = Agree

○ 6 = Strongly Agree

- Hand out the directions on the following page (between the dashed lines) on one sheet of paper. You may have to modify the directions based on your circumstance. Read the directions aloud to the students then ask them to answer the "I like to eat pizza" item to ensure that they understand how to use the 6-point scale. After a few seconds, read the text below the pizza item and ask them if they have any questions. Next, collect these directions and hand out one of the versions of the MUSIC Inventory on the pages that follow. I do not hand out these two sheets at the same time because I do not want any students to start the inventory before I finish reading the directions.

Validity Evidence

Several studies have provided validity evidence for the use of the middle/high school version of the MUSIC Inventory.
- Jones, Sahbaz, Schram, and Chittum (2017) and Chittum and Jones (2017) have provided validity evidence for the middle/high school version to be used with fifth-grade to seventh-grade students in science classes. In the Jones, Sahbaz, et al. (2017) study, Cronbach's alpha values were good (eMpowerment α = .72; Usefulness α= .80; Success α = .84; Interest α = .77; Caring α = .85) and the fit indices produced from a one-factor measurement model were acceptable. In the Chittum and Jones (2017) study, Cronbach's alpha values were good and ranged from .72 to .85 for the five MUSIC Inventory scales over three samples; the fit indices produced from three different confirmatory factor analyses were acceptable.
- Parkes, Jones, and Wilkins (2017) have provided validity evidence for this version to be used with fifth-grade to twelfth-grade students in music and band ensemble classes. Cronbach's alpha values ranged from good to excellent (eMpowerment α = .73; Usefulness α= .86; Success α = .92; Interest α = .91; Caring α = .92) and the fit indices produced from a confirmatory factor analysis were acceptable.
- The middle/high school version of the MUSIC Inventory was also translated to Icelandic and Schram and Jones (2016) provided validity evidence for its use with Icelandic middle school students in science classes. Chronbach's alpha values were as follows: empowerment α = .68; usefulness α= .87; success; α = .83; interest α = .86; and caring α = .88. They also conducted a confirmatory factor analysis and found that the data fit the model well.

The inventories are provided on the following pages.

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Directions

This is not a test and there are no right or wrong answers. We are only interested in your <u>honest opinion</u>. Your responses will remain confidential. This means that no one at your school will know how you answered these questions because your names will be removed from the questionnaire and your answers will be summarized with the answers of the other students in your school.

Some of the questions will seem similar to one another; however, it is important that you answer all of them to ensure that we completely understand your answers.

The questions ask you to select a number for your answer. Please select the number that best describes what <u>you believe</u>.

Example Question 1

Please select one of the numbers from 1 to 6 below and write it in the space next to the question.

1 Strongly disagree	2 Disagree	3 Somewhat disagree	4 Somewhat agree	5 Agree	6 Strongly agree

_____   1. I like to eat pizza.

For this question, you would select a "6" if you like to eat pizza a lot, you would select a "1" if you do not like pizza at all, or any number in between depending on how much you like pizza. What number would you choose if you liked pizza a little? Maybe a 2, or 3, or 4. You can pick any number depending on how much you like pizza. You should answer the questions on the real survey using this same scale.

––

<u>MUSIC Inventory (Middle/High School Student version, present tense)</u>
(to be administered near the <u>beginning or middle</u> of a course, although it can be used at the end)

The inventories are provided on the following pages.

Questions About Science Class

These items ask you about your current **SCIENCE CLASS** and **SCIENCE TEACHER**.

Please select one of the numbers from 1 to 6 below and write it in the space next to each question.

1 Strongly disagree	2 Disagree	3 Somewhat disagree	4 Somewhat agree	5 Agree	6 Strongly agree

_____ 1. The knowledge I gain in science class is important for my future.

_____ 2. I am confident that I can succeed in science class work.

_____ 3. My science teacher cares about how well I do in science class.

_____ 4. I am capable of getting a high grade in science class.

_____ 5. I have the freedom to complete my science class work in my own way.

_____ 6. The science class work is interesting to me.

_____ 7. I feel that I can be successful in meeting the academic challenges in science class.

_____ 8. I enjoy completing science class work.

_____ 9. In general, science class work is useful to me.

_____ 10. During science class, I feel that I can be successful on the class work.

_____ 11. My science teacher is friendly.

_____ 12. I have choices in what I am allowed to do in science class.

_____ 13. I find science class work to be relevant to my future.

_____ 14. My science teacher is willing to assist me if I need help in science class.

_____ 15. My science teacher is respectful of me.

_____ 16. I have control over how I learn the content in science class.

_____ 17. The science class work holds my attention.

_____ 18. I have options in how to achieve the goals in science class.

<u>MUSIC Inventory (Middle/High School Student version, past tense)</u>
(can be administered near the <u>end</u> of a course, or the present tense version can be used)

<u>Directions</u>

These items ask you about your current <u>SCIENCE CLASS</u> and <u>SCIENCE TEACHER</u>.

Please select one of the numbers from 1 to 6 below and write it in the space next to each question.

1 Strongly disagree	2 Disagree	3 Somewhat disagree	4 Somewhat agree	5 Agree	6 Strongly agree

_____ 1. The knowledge I gained in science class is important for my future.

_____ 2. I was confident that I could succeed in science class work.

_____ 3. My science teacher cared about how well I did in science class.

_____ 4. I was capable of getting a high grade in science class.

_____ 5. I had the freedom to complete my science class work in my own way.

_____ 6. The science class work was interesting to me.

_____ 7. I felt that I could be successful in meeting the academic challenges in science class.

_____ 8. I enjoyed completing science class work.

_____ 9. In general, science class work was useful to me.

_____ 10. During science class, I felt that I could be successful on the class work.

_____ 11. My science teacher was friendly.

_____ 12. I had choices in what I was allowed to do in science class.

_____ 13. I found science class work to be relevant to my future.

_____ 14. My science teacher was willing to assist me if I needed help in science class.

_____ 15. My science teacher was respectful of me.

_____ 16. I had control over how I learned the content in science class.

_____ 17. The science class work held my attention.

_____ 18. I had options in how to achieve the goals in science class.

MUSIC Inventory (Middle/High School Student version, past tense)
(to be administered near the <u>end</u> of an **activity or lesson**)

Directions

These items ask you about the science <u>activity you just finished</u> and the <u>teacher of the activity</u>.

Please select one of the numbers from 1 to 6 below and write it in the space next to each question.

1 Strongly disagree	2 Disagree	3 Somewhat disagree	4 Somewhat agree	5 Agree	6 Strongly agree

_____ 1. The knowledge I gained in the activity is important for my future.

_____ 2. I was confident that I could succeed in the activity.

_____ 3. My teacher cared about how well I did in the activity.

_____ 4. I was capable of getting a high grade in the activity.

_____ 5. I had the freedom to complete the activity in my own way.

_____ 6. The activity was interesting to me.

_____ 7. I felt that I could be successful in meeting the challenges in the activity.

_____ 8. I enjoyed completing the activity.

_____ 9. In general, the activity was useful to me.

_____ 10. During the activity, I felt that I could be successful.

_____ 11. My teacher was friendly.

_____ 12. I had choices in what I was allowed to do in the activity.

_____ 13. I found the activity to be relevant to my future.

_____ 14. My teacher was willing to assist me if I needed help in the activity.

_____ 15. My teacher was respectful of me.

_____ 16. I had control over how I learned the content in the activity.

_____ 17. The activity held my attention.

_____ 18. I had options in how to achieve the goals in the activity.

Instructions for Scoring the MUSIC Inventory (Middle/High School Student version)

To obtain a score for each scale, average the values for the items in the scales as shown below.

Empowerment score = (item 5 + item 12 + item 16 + item 18) / 4
Usefulness score = (item 1 + item 9 + item 13) / 3
Success score = (item 2 + item 4 + item 7 + item 10) / 4
Interest score = (item 6 + item 8 + item 17) / 3
Caring score = (item 3 + item 11 + item 14 + item 15) / 4

Other important notes:
- Do not sum or average all 18 items because this produces a meaningless value. It is inconsistent with the principles of the MUSIC model to assume that motivation is the sum of empowerment, usefulness, success, interest, and caring. Although this may be true in some cases, it is possible that a student is highly motivated and engaged when she is high on only one or two of the MUSIC components and low on the others.

Scales	Items by Scale
Empowerment (4 items)	• I have the freedom to complete my science class work in my own way. • I have choices in what I am allowed to do in science class. • I have control over how I learn the content in science class. • I have options in how to achieve the goals in science class.
Usefulness (3 items)	• The knowledge I gain in science class is important for my future. • In general, science class work is useful to me. • I find science class work to be relevant to my future.
Success (4 items)	• I am confident that I can succeed in science class work. • I am capable of getting a high grade in science class. • I feel that I can be successful in meeting the academic challenges in science class. • During science class, I feel that I can be successful on the class work.
Interest (3 items)	• The science class work is interesting to me. • I enjoy completing science class work. • The science class work holds my attention.
Caring (4 items)	• My science teacher cares about how well I do in science class. • My science teacher is friendly. • My science teacher is willing to assist me if I need help in science class. • My science teacher is respectful of me.

MUSIC® Inventory (Elementary School Student version)

Purpose

The purpose of the Elementary School Student version of the MUSIC Inventory is to measure the extent to which elementary school students perceive the presence of each of the MUSIC model components in an activity or assignment that they just completed that day. It can be used by teachers to help them identify areas of strengths and weaknesses related to factors that affect students' motivation and engagement.

Miranda Sigmon and I developed this version of the MUSIC Inventory by writing new items and adapting items from the College Student and Middle/High School version of the MUSIC Inventory.

Instructions for Administering the Elementary School version of the MUSIC Inventory

- The items are worded in the past tense and ask about a specific assignment or activity.
- The inventory can be used **after any assignment or activity** in any subject area.
- Title the inventory as general as possible, such as "Questions About Class," and delete the text above the word "Directions" in the example on the following page. Titling the inventory as "motivation" or something similar could affect students' responses because of their preconceived notions of this word.
- **Order the items randomly**. The versions in this guide are already ordered randomly and can be used in the order shown. But if you administer the inventory online and your online survey software has the feature, I recommend that you have the software randomize the questions differently for each student.
- For the 1 to 4 rating scale, provide each number along with the associated description (e.g., 1 = *no*). The scale is presented correctly in this guide.
- **Do not interpret any of the items** for the students, they must make their own interpretation of the items. If they ask you what an item means, say something like: "Answer it based on whatever you think it means."
- Typically, responses have been collected on paper; however, it is possible to administer the inventory online.

Copy the directions on the next page (between the dashed lines) on one-half sheet of paper. Hand it out to students and read the directions aloud. Then read the questions below it to ensure that they understand how to answer the questions.

Next, collect these directions and hand out the elementary school version of the MUSIC Inventory that is on the following page. Do not hand out these two pieces of paper at the same time because students may start completing the inventory before they understand the directions.

For first and second grade students:
- Read the directions and then read each item one at a time allowing time between for the students to write down their answer. Read each of the 15 items aloud to the students. You may read the items, but do not interpret them for students or make-up your own wording.

For third, fourth, and fifth grade students:
- Read the directions aloud and then allow the students to read the items and select answers on their own.

Validity Evidence

Jones and Sigmon (2016) provided validity evidence for the use of the elementary school version of the MUSIC Inventory with students in first to fifth grades. We surveyed 535 students and reported Cronbach's alpha values of .72 for empowerment, .71 for usefulness, .65 for success, .76 for interest, and .64 for caring. Results of confirmatory factor analysis produced fit indices within acceptable ranges.

The inventory is provided on the following pages.

_ _

Directions

This is not a test and there are no right or wrong answers. We are only interested in your <u>honest opinion</u>. The questions ask you to pick a number about how you feel.

Example Question 1

Please pick one of the numbers from 1 to 4 below and write it in the space next to the question.

1	2	3	4
No	Maybe	Yes	Definitely, Yes!

_____ 1. I like to eat pizza.

_ _

Read the following to students:
What number would you pick if you liked pizza a lot? Yes, a "4." What number would you pick if you did not like pizza at all? Yes, a "1". How about if you liked it a little? You could pick a "2" or a "3" depending on how much you liked it. Any questions about how to pick numbers about how you feel about the question?

MUSIC Inventory (Elementary School Student version, past tense)
(to be administered near the end of an <u>activity or assignment</u>)

Directions   **Date:_____**

These questions ask you about what you worked on today in this class (the teacher will tell you what it was). Please think about only this as you answer these questions. There are no right or wrong answers to these questions. Please pick one of the numbers from 1 to 4 below and write it in the blank next to the question.

1	2	3	4
No	Maybe	Yes	Definitely, Yes!

_____ 1. I was able to do a good job.

_____ 2. I liked what I did.

_____ 3. What I learned could help me in school.

_____ 4. I knew I could do well.

_____ 5. I could do it my way.

_____ 6. My teacher was helpful.

_____ 7. It was useful to me.

_____ 8. What I did was interesting.

_____ 9. My teacher cared about how well I did.

_____ 10. It was easy to do.

_____ 11. I made decisions.

_____ 12. What I did was fun.

_____ 13. I can use what I learned.

_____ 14. My teacher likes me.

_____ 15. I had choices.

Instructions for Scoring the MUSIC Inventory (Elementary School Student version)

To obtain a score for each scale, average the values for the items in the scales as shown below.

Empowerment score = (item 5 + item 11 + item 15) / 3
Usefulness score = (item 3 + item 7 + item 13) / 3
Success score = (item 1 + item 4 + item 10) / 3
Interest score = (item 2 + item 8 + item 12) / 3
Caring score = (item 6 + item 9 + item 14) / 3

Other important notes:
- Do not sum or average all 15 items because this produces a meaningless value. It is inconsistent with the principles of the MUSIC model to assume that motivation is the sum of empowerment, usefulness, success, interest, and caring. Although this may be true in some cases, it is possible that a student is highly motivated and engaged when she is high on only one or two of the MUSIC components and low on the others.

Scales	Items by Scale
Empowerment (3 items)	• I could do it my way. • I made decisions. • I had choices.
Usefulness (3 items)	• What I learned could help me in school. • It was useful to me. • I can use what I learned.
Success (3 items)	• I was able to do a good job. • I knew I could do well. • It was easy to do.
Interest (3 items)	• I liked what I did. • What I did was interesting. • What I did was fun.
Caring (3 items)	• My teacher was helpful. • My teacher cared about how well I did. • My teacher likes me.

MUSIC® Inventory (Arabic translation of the College Student version)

Purpose

The purpose of the Arabic translation of the College Student version of the MUSIC Inventory is make the MUSIC Inventory accessible to individuals who speak Arabic. The initial translator for this version was Dr. Hanaa Ezzat Mohamed and it was back-translated by Mohamed Farouk. Brett Jones checked the English back-translation and it was acceptable.

Instructions for Administering This Version

Please closely follow the instruction in the "Instructions for Administering the College Student version of the MUSIC Inventory" section of this document.

Instructions for Scoring the MUSIC Inventory (College Student version)

To obtain a score for each scale, average the values for the items in the scales as shown below.

Empowerment score = (item 2 + item 8 + item 12 + item 17 + item 26) / 5
Usefulness score = (item 3 + item 5 + item 19 + item 21 + item 23) / 5
Success score = (item 7 + item 10 + item 14 + item 18) / 4
Interest score = (item 1 + item 6 + item 9 + item 11 + item 13 + item 15) / 6
Caring score = (item 4 + item 16 + item 20 + item 22 + item 24 + item 25) / 6

Other important notes:
- Do not sum or average all 26 items because this produces a meaningless value. It is inconsistent with the principles of the MUSIC model to assume that motivation is the sum of empowerment, usefulness, success, interest, and caring. Although this may be true in some cases, it is possible that a student is highly motivated and engaged when she is high on only one or two of the MUSIC components and low on the others.

Validity Evidence

Mohamed, Soliman, and Jones (2013) provided validation evidence for an earlier edition of the translation of the MUSIC Inventory with students in Egypt. Since then, the translation has been updated to that provided on the following page. Validity evidence for this newer translation has been provided with students from Egypt by Jones, Khajavy, Li, Mohamed, and Reilly (under review).

The inventories are provided on the following pages.

العبارات التي تشير إلى كلمة المقرر المقصود به هذا المقرر ،والمقصود بالمحاضر هو المحاضر الرئيس لهذا المقرر، وكلمة "**أعمال المقرر**"
تشير إلى أية أعمال قمت بها في هذا المقرر مثل التكليفات والأنشطة والقراءات... .

–لا توجد إجابات صحيحه او خاطئة ، من فضلك أجب بأمانة وصدق .

استخدم التقديرات الآتية في تقييم العبارات التالية

6	5	4	3	2	1
اوافق بشدة	أوافق	أوافق إلى حد ما	لا أوافق إلى حد ما	لا أوافق	لا أوافق بشدة

م	العبارة :
1. _____	تجذب أعمال المقرر انتباهي
2. _____	لدي الفرصة لأقرر كيف سأحقق أهداف المقرر
3. _____	أعمال المقرر بصفة عامة مفيدة لي
4. _____	المحاضر متاح لكي يجيب عن أسئلتي حول اعمال المقرر
5. _____	أعمال المقرر نافعة لي
6. _____	تجذب طرق التدريس المستخدمة في هذا المقرر انتباهي
7. _____	أنا واثق أنني أستطيع النجاح في أعمال المقرر
8. _____	لدي الحرية لإنجاز أعمال المقرر بطريقتي
9. _____	أنا ستمتع بطرق التدريس المستخدمة في هذا المقرر
10. _____	أشعر أنني أستطيع النجاح في مواجهة التحديات الأكاديمية في هذا المقرر
11. _____	تجعلني طرق التدريس المستخدمة منخرطا في المقرر
12. _____	لدي اختيارات في كيفية تحقيق أهداف المقرر
13. _____	أستمتع بأداء أعمال المقرر
14. _____	أنا قادر على الحصول على تقدير عال في هذا المقرر
15. _____	أعمال المقرر شيقة بالنسبة لي
16. _____	المحاضر على استعداد لمساعدتي إذا احتجت مساعدة في المقرر
17. _____	أتحكم في كيفية تعلم محتوى المقرر
18. _____	خلال المقرر شعرت بأنني يمكنني ان اكون ناجحا في اعمال المقرر
19. _____	أجد أن أعمال المقرر مرتبطة بمستقبلي
20. _____	يهتم المحاضر بمدى جودة أدائي في المقرر
21. _____	سيكون باستطاعتي استخدام المعارف التي اكتسبتها من المقرر
22. _____	يحترمني المحاضر
23. _____	المعارف التي أكتسبها في هذا المقرر مهمة لمستقبلي
24. _____	المحاضر ودود

_____ 25.   أعتقد أن المحاضر يراعي مشاعري

_____ 26.   لدي مرونة في ما هو مسموح لي عمله في المقرر

MUSIC® Inventory (Chinese translation of the College Student version)

Purpose

The purpose of the Chinese translation of the College Student version of the MUSIC Inventory is make the MUSIC Inventory accessible to individuals who speak Chinese. The initial translator for this version was Dr. Ming Li at Sias International University in China. The inventory is provided on the following page; and on the page after, there is a version that was modified slightly by Yufang Chu (朱玉仿) for use in Taiwan.

Instructions for Administering This Version

Please closely follow the instruction in the "Instructions for Administering the College Student version of the MUSIC Inventory" section of this document.

Instructions for Scoring the MUSIC Inventory (College Student version)

To obtain a score for each scale, average the values for the items in the scales as shown below.

Empowerment score = (item 2 + item 8 + item 12 + item 17 + item 26) / 5
Usefulness score = (item 3 + item 5 + item 19 + item 21 + item 23) / 5
Success score = (item 7 + item 10 + item 14 + item 18) / 4
Interest score = (item 1 + item 6 + item 9 + item 11 + item 13 + item 15) / 6
Caring score = (item 4 + item 16 + item 20 + item 22 + item 24 + item 25) / 6

Other important notes:
- Do not sum or average all 26 items because this produces a meaningless value. It is inconsistent with the principles of the MUSIC model to assume that motivation is the sum of empowerment, usefulness, success, interest, and caring. Although this may be true in some cases, it is possible that a student is highly motivated and engaged when she is high on only one or two of the MUSIC components and low on the others.

Validity Evidence

The validity evidence for the use of the Chinese translation of this version of the MUSIC Inventory with college students is very good. In a sample of 300 undergraduate students, Jones, Li, and Cruz (2017) reported Cronbach's alpha values of .82 for empowerment, .89 for usefulness, .87 for success, .93 for interest, and .88 for caring. Confirmatory factor analysis showed that the five-factor model fit the data well, as demonstrated by acceptable fit indices.

The inventories are provided on the following pages.

你对本调查问卷中问题的回答，答案没有对错之分。我们感兴趣的是你的观点。请诚实回答本问卷的问题。你的答案将会保密，它们不会被你的任课老师看到，或者是被用来作为本课程期末成绩评判的一部分。

所有的问题中所提到的"课程"或是"任课教师"指本学期的《大学英语》这门课及大学英语任课老师。

请用以下量表来回答本部分问卷问题。

1	2	3	4	5	6
强烈不同意	不同意	有点儿不同意	有点儿同意	同意	强烈同意

请注意：这里"这门课"一词，指该门课程中你所做的任何事情，包括作业，活动，阅读资料等等。

_____ 1. 这门课抓住我的注意力。

_____ 2. 我自己有机会去决定如何达到课程目标。

_____ 3. 总体来说，这门课对我是有用的。

_____ 4. 任课老师能够回答我的有关这门课的问题。

_____ 5. 我从这门课中受益。

_____ 6. 这门课的教学方法能吸引我的注意力。

_____ 7. 我有信心在这门课中取得成功。

_____ 8. 我有自由以自己的方式去完成课程作业。

_____ 9. 我很喜爱这门课程中的教学方法。

_____ 10.我感觉我能够成功地达到这门课的学业目标。

_____ 11.这门课的教学方法让我积极参与其中。

_____ 12. 我有选择权如何达到该课程目标。

_____ 13. 我很开心去完成该课程各项作业。

_____ 14. 我有能力在这门课程中获得高分。

_____ 15. 这门课对我来讲很有趣。

_____ 16. 在我需要的时候，这门课的老师很乐意帮助我。

_____ 17. 我能掌控如何学习本课程的内容。

_____ 18. 总观整个课程，我已经觉得我能在这门课中取得成功。

_____ 19. 我发现这门课和我的未来密切相关。

_____ 20. 老师关注我在这门课程中的学习状况。

_____ 21. 我将来能够运用我在这门课中所学到的知识。

_____ 22. 任课老师尊重我。

_____ 23. 这门课学到的知识对我的未来很重要。

_____ 24. 任课老师很友好。

_____ 25. 我相信任课老师关注我的感受。

_____ 26. 我有灵活性来完成这门课所允许我做的事情。

MUSIC學業動機問卷大學學生繁體中文版

你對本調查問卷中問題的回答，答案沒有對錯之分。我們感興趣的是你的觀點。請誠實回答本問卷的問題。你的答案將會保密，它們不會被用來作為本課程期末成績評判的一部分。所有問題中所提到的＂課程＂或是＂任課教師＂是指本學期《創意思考》這門課及創意思考任課老師。

請用以下量表來回答問卷問題。

1	2	3	4	5	6
非常不同意	不同意	有點不同意	有點同意	同意	非常同意

請注意：這裡＂這門課＂一詞，指該門課程中你所做的任何事情，包括作業、活動、閱讀資料等等。

_____ 1. 這門課抓住我的注意力。

_____ 2. 我自己有機會去決定如何達到課程目標。

_____ 3. 總體來說，這門課對我是有用的。

_____ 4. 任課老師能够回答我有關這門課的問題。

_____ 5. 我從這門課中受益。

_____ 6. 這門課的教學方法能吸引我的注意力。

_____ 7. 我有信心在這門課中取得成功。

_____ 8. 我有自由以自己的方式去完成課程作業。

_____ 9. 我很喜愛這門課程中的教學方法。

_____ 10. 我感覺我能夠成功地達到這門課的學業目標。

_____ 11. 這門課的教學方法讓我積極參與其中。

_____ 12. 我有選擇權如何達到該課程目標。

_____ 13. 我很開心去完成該課程各項作業。

_____ 14. 我有能力在這門課程中獲得高分。

_____ 15. 這門課對我來講很有趣。

_____ 16. 在我需要的時候，這門課的老師很樂意幫助我。

_____ 17. 我能掌控如何學習本課程的内容。

_____ 18. 總觀整個課程，我已經覺得我能在這門課中取得成功。

_____ 19. 我發現這門課和我的未來密切相關。

_____ 20. 老師關注我在這門課程中的學習狀況。

_____ 21. 我將來能够運用我在這門課中所學到的知識。

_____ 22. 任課老師尊重我。

_____ 23. 這門課學到的知識對我的未來很重要。

_____ 24. 任課老師很友好。

_____ 25. 我相信任課老師關注我的感受。

_____ 26. 我有彈性自主的來完成這門課允許我做的事情。

MUSIC® Inventory (Dutch translation of the College Student version, present tense)

Purpose

The purpose of the Dutch translation of the College Student version of the MUSIC Inventory is make the MUSIC Inventory accessible to individuals who speak Dutch. The initial translator for this version was Dr. Anneke van Houwelingen (Utrecht University in Utrecht, the Netherlands). The translation was back-translated to English by Kirsten Szklany and Martina O'Flaherty and checked by Brett Jones, which resulted in minor edits to five of the items.

Instructions for Administering This Version

Please closely follow the instructions in the "Instructions for Administering the College Student version of the MUSIC Inventory" section of this document for how to administer and format the items.

Instructions for Scoring the MUSIC Inventory (College Student version)

To obtain a score for each scale, average the values for the items in the scales as shown below.

Empowerment score = (item 2 + item 8 + item 12 + item 17 + item 26) / 5
Usefulness score = (item 3 + item 5 + item 19 + item 21 + item 23) / 5
Success score = (item 7 + item 10 + item 14 + item 18) / 4
Interest score = (item 1 + item 6 + item 9 + item 11 + item 13 + item 15) / 6
Caring score = (item 4 + item 16 + item 20 + item 22 + item 24 + item 25) / 6

Other important notes:
- Do not sum or average all 26 items because this produces a meaningless value. It is inconsistent with the principles of the MUSIC model to assume that motivation is the sum of empowerment, usefulness, success, interest, and caring. Although this may be true in some cases, it is possible that a student is highly motivated and engaged when she is high on only one or two of the MUSIC components and low on the others.

Validity Evidence

We do not yet have any validity evidence for the translation other than the evidence for the English version with college students.

English – College version, present tense	Translation to Dutch
Instructions	Instructie
The items that refer to a course or instructor refer to this course and your primary instructor	De vragen die betrekking hebben op een cursus of een docent hebben betrekking op deze cursus en jouw docent
Please rate the items in this section using the following scale: 1 = Strongly disagree 2 = Disagree 3 = Somewhat disagree 4 = Somewhat agree 5 = Agree 6 = Strongly agree	Beoordeel de stellingen aan de hand van de volgende indeling 1 = helemaal oneens 2 = oneens 3 = een beetje oneens 4 = een beetje mee eens 5 = mee eens 6 = helemaal mee eens.
Note that the word "coursework" refers to anything that you do in the course, including assignments, activities, readings, etc.	Het woord 'onderwijsactiviteit' heeft betrekking op alles wat je in de cursus gedaan hebt, dus alle activiteiten, opdrachten, leeswerk, werkcolleges etc.
There are no right or wrong answers to these questions. Please answer them honestly. Some of the questions might seem repetitive, but it is important that you answer tham all to obtain the best possible results.	Er zijn geen goede of foute antwoorden. Beantwoord de stelling zo eerlijk mogelijk, Sommige stellingen lijken wellicht sterk op elkaar maar het is belangrijk om alle stellingen te beantwoorden om zodoende een optimaal resultaat te bereiken
1. The coursework holds my attention.	1. De gebruikte onderwijsactiviteiten houden afdoende mijn aandacht vast.
2. I have the opportunity to decide for myself how to meet the course goals.	2. Ik kan zelf bepalen hoe ik de cursusdoelen kan bereiken.
3. In general, the coursework is useful to me.	3. Over het algemeen genomen is de cursus nuttig voor mij.
4. The instructor is available to answer my questions about the coursework.	4. De docent is bereid om mijn vragen over de leerstof te beantwoorden.
5. The coursework is beneficial to me.	5. De cursus was nuttig voor mij.
6. The instructional methods used in this course hold my attention.	6. De in de cursus gebruikte onderwijsmethoden weten mijn aandacht vast te houden.
7. I am confident that I can succeed in the coursework.	7. Ik vertrouw erop dat ik de cursus succesvol kan afronden.
8. I have the freedom to complete the coursework my own way.	8. Ik heb de vrijheid om de cursus te volbrengen hoe ik dat wilde.
9. I enjoy the instructional methods used in this course.	9. De gebruikte onderwijsvormen zijn prettig (leuk).
10. I feel that I can be successful in meeting the academic challenges in this course.	10. Ik heb het gevoel dat ik de academische uitdagingen binnen de cursus aan kan.

11. The instructional methods engage me in the course.	11. De gebruikte onderwijsvormen betrekken mij bij de cursus.
12. I have options in how to achieve the goals of the course.	12. Ik had de vrijheid om te bepalen hoe ik de cursusdoelen kon bereiken.
13. I enjoy completing the coursework.	13. Ik vind het leuk om aan de cursusopdrachten te werken.
14. I am capable of getting a high grade in this course.	14. Ik ben in staat om een hoog cijfer te behalen voor deze cursus.
15. The coursework is interesting to me.	15. De onderwijsactiviteiten zijn voor mij interessant.
16. The instructor is willing to assist me if I need help in the course.	16. De docent is behulpzaam als ik aangeef hulp nodig te hebben.
17. I have control over how I learn the course content.	17. Ik kan zelf bepalen hoe ik de leerstof bestudeerde.
18. Throughout the course, I have felt that I could be successful on the coursework.	18. Ik voel dat ik succesvol ben in de onderwijsactiviteiten.
19. I find the coursework to be relevant to my future.	19. Ik vind de gebruikte onderwijsactiviteiten relevant voor mijn toekomst.
20. The instructor cares about how well I do in this course.	20. De docent is betrokken bij mijn voortgang in de cursus.
21. I will be able to use the knowledge I gain in this course.	21. Ik kan de kennis die ik heb opgedaan tijdens cursus goed kunnen gebruiken.
22. The instructor is respectful of me.	22. De docent behandelt mij met respect.
23. The knowledge I gain in this course is important for my future.	23. De kennis die ik heb opgedaan gedurende de cursus is belangrijk voor mijn toekomst.
24. The instructor is friendly.	24. De docent is vriendelijk.
25. I believe that the instructor cares about my feelings.	25. Ik denk dat de docent rekening houdt met mij.
26. I have flexibility in what I am allowed to do in this course.	26. Binnen de grenzen van de cursus heb ik de vrijheid om te doen wat ik wil.

MUSIC® Inventory (Farsi/Persian translation of the College Student version)

Purpose

The purpose of the Farsi translation of the College Student version of the MUSIC Inventory is make the MUSIC Inventory accessible to individuals who speak Farsi. The initial translators for this version were Farzaneh Mikaeli Manee and Elham Salehi at Urmia University in Iran. The translation was back-translated to English by Dr. Shabnam Kavousi and checked by Brett Jones, which resulted in a minor edit to one of the items. Other minor edits were then made by Dr. Hassan Khajavy at the University of Bojnord in Iran.

Instructions for Administering This Version

Please closely follow the instruction in the "Instructions for Administering the College Student version of the MUSIC Inventory" section of this document.

Instructions for Scoring the MUSIC Inventory (College Student version)

To obtain a score for each scale, average the values for the items in the scales as shown below.

Empowerment score = (item 2 + item 8 + item 12 + item 17 + item 26) / 5
Usefulness score = (item 3 + item 5 + item 19 + item 21 + item 23) / 5
Success score = (item 7 + item 10 + item 14 + item 18) / 4
Interest score = (item 1 + item 6 + item 9 + item 11 + item 13 + item 15) / 6
Caring score = (item 4 + item 16 + item 20 + item 22 + item 24 + item 25) / 6

Other important notes:
- Do not sum or average all 26 items because this produces a meaningless value. It is inconsistent with the principles of the MUSIC model to assume that motivation is the sum of empowerment, usefulness, success, interest, and caring. Although this may be true in some cases, it is possible that a student is highly motivated and engaged when she is high on only one or two of the MUSIC components and low on the others.

Validity Evidence

Farzaneh Mikaeli Manee at Urmia University in Iran has conducted a study with this version and the preliminary evidence suggests that the translation is acceptable. Validity evidence for this newer translation has been provided with students in Iran by Jones, Khajavy, Li, Mohamed, and Reilly (under review). Research is ongoing and will be published soon.

The inventory is provided on the following pages.

دستورالعمل:

سوالاتی که به درس یا استاد اشاره می کند، منظور **این درس** و **استاد** این درس است. واژه **"فعالیت درسی"** به هر چیزی که شما در این درس انجام داده اید اشاره میکند که شامل تکالیف، فعالیت ها، مطالعات ، و غیره می شود. پاسخ صحیح یا اشتباهی برای این سوالات وجود ندارد. خواهشمند است با صداقت پاسخ دهید.

لطفا این سوالات را با استفاده از مقیاس زیر ارزیابی کنید.

6	5	4	3	2	1
کاملا موافق	موافق	تا حدودی موافق	تاحدودی مخالف	مخالف	کاملا مخالف

_____1- فعالیت های درسی توجه من را جلب میکند.

_____2- فرصت این را دارم که درمورد چگونگی رسیدن به اهداف درس تصمیم بگیرم.

_____3- به طور کلی، ترم برای من مفید است.

_____4- مربی برای پاسخگویی به سوالات من در مورد فعالیت های درسی حضور دارد (در دسترس است)

_____5- فعالیت های درسی برای من سودمند است.

_____6- روشهای آموزشی مورد استفاده در این درس توجه مرا جلب میکند.

_____7-مطمئن هستم که می توانم در فعایت های درسی موفق باشم.

_____8- برای تکمیل فعالیت های درسی به روش شخصی خودم آزادی دارم.

_____9-از روش های آموزشی مورد استفاده در این دوره لذت می برم.

_____10-احساس میکنم که میتوانم به طور موفقیت آمیزی با چالش های علمی این درس مقابله کنم.

_____11- روش های آموزشی استفاده شده در این کلاس، مرا به این درس علاقه مند می کند.

_____12- در مورد چگونگی رسیدن به اهداف این دوره، اختیاراتی دارم.

_____13- از تکمیل فعالیت های درسی لذت می برم.

_____14- قادر به گرفتن نمره بالا در این درس هستم.

_____15- فعالیت های درسی برای من جالب هستند.

_____16- درصورت نیاز به هرگونه کمک در کلاس، استاد مشتاقانه مرا یاری می کند.

_____17- من بر نحوه ی یادگیری محتوای درس در کلاس کنترل دارم.

_____18- در طی ترم، احساس کرده ام که می توانم در فعالیت های درسی موفق باشم.

_____19- فعالیت های درسی این کلاس بر آینده ام تاثیرگذار خواهد بود.

_____20-استاد بر نحوه ی عملکرد من در کلاس اهمیت میدهد.

_____21- قادر به استفاده از دانشی که در این ترم به دست آورده ام خواهم بود.

_____22- استاد برای من قابل احترام است.

_____23- دانشی که در این درس به دست می آورم برای آینده ام اهمیت دارد.

_____24- استاد مهربان است.

_____25- معتقدم که استاد به احساسات من اهمیت می دهد.

_____26- در آنچه که اجازه انجام دادنش را در این درس دارم، انعطاف پذیری دارم.

MUSIC® Inventory (Farsi translation of the Middle/High School Student version)

Purpose

The purpose of the Farsi translation of the Middle/High School Student version of the MUSIC Inventory is make the MUSIC Inventory accessible to individuals who speak Farsi. The initial translator for this version was Behrouz Atashrouz in Iran. The translation was back-translated to English by Dr. Shabnam Kavousi and checked by Brett Jones, which resulted in a minor edit to one of the items. The English items on the following pages are not the back-translations; rather, they are the original English items.

Instructions for Administering This Version

Please closely follow the instruction in the "Instructions for Administering the Middle/High School version of the MUSIC Inventory" section of this document.

Instructions for Scoring the MUSIC Inventory (Middle/High School Student version)

To obtain a score for each scale, average the values for the items in the scales as shown below.

Empowerment score = (item 5 + item 12 + item 16 + item 18) / 4
Usefulness score = (item 1 + item 9 + item 13) / 3
Success score = (item 2 + item 4 + item 7 + item 10) / 4
Interest score = (item 6 + item 8 + item 17) / 3
Caring score = (item 3 + item 11 + item 14 + item 15) / 4

Other important notes:
- Do not sum or average all 18 items because this produces a meaningless value. It is inconsistent with the principles of the MUSIC model to assume that motivation is the sum of empowerment, usefulness, success, interest, and caring. Although this may be true in some cases, it is possible that a student is highly motivated and engaged when she is high on only one or two of the MUSIC components and low on the others.

Validity Evidence

Behrouz Atashrouz is using this version of the MUSIC Inventory in Iran. This research is ongoing and will be published soon. Because it is a direct translation of the English version of the MUSIC Inventory, it is likely that this version will demonstrate acceptable validity as well.

The inventory is provided on the following pages.

MUSIC Inventory (Middle/High School Student version)
پرسشنامهMUSIC(نسخه دانش آموزان دبیرستانی)

سوال نمونه 1

لطفا یکی از شماره 1 تا 6 را انتخاب کرده و در آن را در فضای خالی کنار سوال بنویسید.

1	2	3	4	5	6
Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree
کـامـلا مـخـالـفم	مخالفم	تا حدودی مخالفم	تا حدودی موافقم	موافقم	کاملا موافقم

_____1.من دوست دارم پیتزا بخورم.
برای این سوال، اگر علاقه زیادی به خوردن پیتزا دارید میتوانید عدد 6
را انتخاب کنید.اگر به طور کلی علاقه ای به خوردن پیتزا ندارید می
توانید عدد1 را انتخاب کنید، یا هر عدد دیگری را در این میان به
میزان علاقه تان به پیتزا بستگی دارد.اگر علاقه کمی به پیتزا دارید چه
عددی را انتخاب می کنید؟ شاید 2، 3 یا 4. شما می توانید با توجه به
علاقه تان به پیتزا هر عددی را انتخاب کنید.شما باید به سوالات این
پرسشنامه در یک مقیاس مشابه به صورت واقعی پاسخ دهید.

<div dir="rtl">

سوالاتی درباره کلاس علوم

راهنما

آیتم های زیر نظر شما را درباره کلاس علوم و معلم علوم میخواهد.
لطفا یکی از شماره 1 تا 6 را انتخاب کرده و در آن را در فضای خالی
کنار سوال بنویسید.

</div>

1	2	3	4	5	6
Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree
کاملا مخالفم	مخالفم	تا حدودی مخالفم	تا حدودی موافقم	موافقم	کاملا موافقم

English	<div dir="rtl">فارسی</div>
_____ 1. The knowledge I gain in science class is important for my future.	<div dir="rtl">1.دانشی که از کلاس علوم _____ به دست می آورم برای آینده من اهمیت دارد.</div>
_____ 2. I am confident that I can succeed in science class work.	<div dir="rtl">2.مطمئن هستم که می _____ توانم در کارهای کلاس علوم موفق شوم.</div>
_____ 3. My science teacher cares about how well I do in science class.	<div dir="rtl">3.معلم کلاس علوم به _____ نحوه عملکرد من در کلاس علوم اهمیت می دهد.</div>
_____ 4. I am capable of getting a high grade in science class.	<div dir="rtl">4. من قادر به گرفتن _____ درجه بالا(نمره بالا) در کلاس علوم هستم.</div>
_____ 5. I have the freedom to complete my science class work in my own way.	<div dir="rtl">5.من برای تکمیل فعالیت _____ های کلاسی به روش شخصی خودم آزادی عمل دارم.</div>
_____ 6. The science class work is interesting to me.	<div dir="rtl">6.فعالیت های کلاس علوم _____ برای من جالب توجه بود.</div>
_____ 7. I feel that I can be successful in meeting the academic challenges in science class.	<div dir="rtl">7. من احساس می کنم که _____ میتوانم به طور موفقیت آمیزی با چالش های علمی درکلاس علوم مقابله کنم.</div>
_____ 8. I enjoy completing science class work.	<div dir="rtl">8. من به طور کامل از _____ فعالیت های کلاس علوم لذت می برم.</div>
_____ 9. In general, science class work is useful to me.	<div dir="rtl">9.به طور کلی، فعالیت _____ های کلاس علوم برای من مفید است.</div>
_____ 10. During science class, I feel that I can be successful on the class work.	<div dir="rtl">10.در طول کلاس علوم، من _____ احساس می کنم می توانم در فعالیت های کلاس موفق باشم.</div>
_____ 11. My science teacher is friendly.	<div dir="rtl">11.معلم علوم من خیلی _____ مهربان است.</div>
_____ 12. I have choices in what I am allowed to do in science class.	<div dir="rtl">12.من در مورد کارهایی _____ که می توانم در کلاس علوم انجام دهم قدرت انتخاب دارم.</div>

_____ 13. I find science class work to be relevant to my future.	۱۳. مـن دریـافـتـه ام کـه _____ فـعـالـیت هـای کـلاس عـلـوم بـر آیـنده مـن تـاثـیـر گـذار خـواهـد بـود.
_____ 14. My science teacher is willing to assist me if I need help in science class.	۱۴.در صورت نیـاز بـه هر _____ گـونـه کـمک مـعـلـم عـلـوم، مشتـاقـانـه بـه مـن کـمک مـی کـند.
_____ 15. My science teacher is respectful of me.	۱۵ معلم علوم برای من احترام قایل است_____
_____ 16. I have control over how I learn the content in science class.	۱۶. مـن بـر نـحوه یـادگیـری _____ مـحتـوای درس عـلـوم کـنتـرل دارم.
_____ 17. The science class work holds my attention.	۱۷.فـعـالـیت هـای کـلاس عـلـوم _____ تـوجه مـن را بـه خـود جـلب مـی کـند.
_____ 18. I have options in how to achieve the goals in science class.	۱۸.مـن بـرای رسیـدن بـه _____ اهداف کـلاس عـلـوم اخـتیـاراتـی دارم.

MUSIC® Inventory (German translation of the College Student version)

Purpose

The purpose of the German translation of the College Student version of the MUSIC Inventory is make the MUSIC Inventory accessible to individuals who speak German. The translator for this version was Dr. Stephan Munz. The translation was back-translated to English by Rebecca Reuter and checked by Brett Jones. The English items on the following pages are not the back-translations; rather, they are the original English items.

Instructions for Administering This Version

Please closely follow the instruction in the "Instructions for Administering the College Student version of the MUSIC Inventory" section of this document.

Instructions for Scoring the MUSIC Inventory (College Student version)

To obtain a score for each scale, average the values for the items in the scales as shown below.

Empowerment score = (item 2 + item 8 + item 12 + item 17 + item 26) / 5
Usefulness score = (item 3 + item 5 + item 19 + item 21 + item 23) / 5
Success score = (item 7 + item 10 + item 14 + item 18) / 4
Interest score = (item 1 + item 6 + item 9 + item 11 + item 13 + item 15) / 6
Caring score = (item 4 + item 16 + item 20 + item 22 + item 24 + item 25) / 6

Other important notes:
- Do not sum or average all 26 items because this produces a meaningless value. It is inconsistent with the principles of the MUSIC model to assume that motivation is the sum of empowerment, usefulness, success, interest, and caring. Although this may be true in some cases, it is possible that a student is highly motivated and engaged when she is high on only one or two of the MUSIC components and low on the others.

Validity Evidence

No studies have been conducted to assess the validity evidence for this German translation. However, it can be used for teaching purposes. If you conduct research and collect validity evidence with this version, please contact Brett Jones and he will report your findings here.

The inventory is provided on the following pages.

English – College version, present tense	Translation to German
Instructions	Anleitung
The items that refer to a course or instructor refer to this course and your primary instructor	Alle Fragen bezüglich des Kurses oder Lehrers beziehen sich auf Ihren Kurs und Ihren primären Lehrer. Alle Fragen beziehen sich nur auf Ihren Kurs und dafür zuständigen Lehrer.
Please rate the items in this section using the following scale: 1 = Strongly disagree 2 = Disagree 3 = Somewhat disagree 4 = Somewhat agree 5 = Agree 6 = Strongly agree	Bitte bewerten Sie die Fragen in diesem Abschnitt auf der folgenden Skala: 1 = Lehne stark ab 2 = Lehne ab 3 = Lehne eher ab 4 = Stimme eher zu 5 = Stimme zu 6 = Stimme stark zu
Note that the word "coursework" refers to anything that you do in the course, including assignments, activities, readings, etc.	Beachten Sie, dass das Wort "Kursaktivitäten" sich auf alle Dinge bezüglich Ihres Kurses beziehen, inklusive Übungsaufgaben, Lernmaßnahmen, Leseaufgaben u.s.w.
There are no right or wrong answers to these questions. Please answer them honestly. Some of the questions might seem repetitive, but it is important that you answer tham all to obtain the best possible results.	Bei diesen Fragen gibt es keine richtigen oder falschen Antworten. Bitte beantworten Sie die Fragen ehrlich. Manche Fragen scheinen sich zu wiederholen, aber es ist wichtig, dass Sie alle Fragen vollständig beantworten um die besten Resultate zu erhalten.
1. The coursework holds my attention.	1. Die Kursaktivitäten erwecken (halten) meine Aufmerksamkeit
2. I have the opportunity to decide for myself how to meet the course goals.	2. Ich habe die Möglichkeit, selbst zu entscheiden, wie ich die Ziele in diesem Kurs erreichen will.
3. In general, the coursework is useful to me.	3. Im Allgemeinen ist der Kurs nützlich für mich
4. The instructor is available to answer my questions about the coursework.	4. Mein Lehrer ist bei Fragen bezüglich des Kurses verfügbar.
5. The coursework is beneficial to me.	5. Der Kurs bringt mir Vorteile
6. The instructional methods used in this course hold my attention.	6. Die Lehrmethoden in diesem Kurs erwecken meine Aufmerksamkeit
7. I am confident that I can succeed in the coursework.	7. Ich bin zuversichtlich, dass ich erfolgreich in diesem Kurs sein kann.
8. I have the freedom to complete the coursework my own way.	8. Ich habe die Freiheit, die Kursinhalte auf meine Art und Weise zu absolvieren
9. I enjoy the instructional methods used in this course.	9. Mir gefallen die Lehrmethoden in diesem Kurs
10. I feel that I can be successful in meeting the academic challenges in this course.	10. Ich glaube, dass ich die akademischen Anforderungen in diesem Kurs erfolgreich bewältigen kann.
11. The instructional methods engage me in the course.	11. Die Lehrmethoden fördern mein Engagement/ Lernbereitschaft in diesem Kurs.
12. I have options in how to achieve the goals of the course.	12. Ich habe verschiedene Optionen, wie ich die Ziele in diesem Kurs erfüllen kann.

13. I enjoy completing the coursework.	13. Ich habe Freude daran, die Kursaufgaben zu bewältigen.
14. I am capable of getting a high grade in this course.	14. Ich bin fähig, eine gute Note in diesem Kurs zu erhalten.
15. The coursework is interesting to me.	15. Die Kursaktivitäten sind für mich interessant.
16. The instructor is willing to assist me if I need help in the course.	16. Mein Lehrer ist bereit mir zu assistieren, falls ich Hilfe brauche.
17. I have control over how I learn the course content.	17. Ich kann selbst kontrollieren, wie ich die Kursinhalte lerne.
18. Throughout the course, I have felt that I could be successful on the coursework.	18. Während des gesamten Kurses hatte ich das Gefühl, dass ich erfolgreich sein kann.
19. I find the coursework to be relevant to my future.	19. Ich empfinde die Kursaktivitäten relevant für meine Zukunft.
20. The instructor cares about how well I do in this course.	20. Mein Lehrer kümmert sich darum, wie erfolgreich ich in diesem Kurs abschneide.
21. I will be able to use the knowledge I gain in this course.	21. Ich werde in der Lage sein, das erlernte Wissen aus diesem Kurs anzuwenden
22. The instructor is respectful of me.	22. Mein Lehrer respektiert mich
23. The knowledge I gain in this course is important for my future.	23. Das erlernte Wissen aus diesem Kurs ist für meine Zukunft wichtig.
24. The instructor is friendly.	24. Mein Lehrer ist freundlich
25. I believe that the instructor cares about my feelings.	25. Ich glaube, dass mein Lehrer sich darum kümmert, wie ich mich fühle.
26. I have flexibility in what I am allowed to do in this course.	26. Bezüglich des Kurses habe ich Freiheiten, was ich machen kann.

Jones, B. D. (2012/2020, September). *User guide for assessing the components of the MUSIC® Model of Motivation.* Retrieved from http://www.theMUSICmodel.com

MUSIC® Inventory (Icelandic translation of the Middle/High School version)

Purpose

The purpose of the Icelandic version of the MUSIC Inventory is make the MUSIC Inventory accessible to individuals who speak Icelandic. The primary translator for this version was Asta Schram.

Validity Evidence

The validity evidence for the use of the Icelandic translation of this version of the MUSIC Inventory with middle school students is very good. In a sample of 241 students in fifth- to eighth-grade (ages 10 to 13), Schram and Jones (2016) reported Cronbach's alpha values of .68 for empowerment, .87 for usefulness, .83 for success, .86 for interest, and .88 for caring. Confirmatory factor analysis showed that the five-factor model fit the data well, as demonstfrated by acceptable fit indices.

Hér á eftir koma tvær útgáfur af MMAMI-Icelandic spurningalistanum.
Öllum er heimilt að nota listana en mikilvægt er að orðalagi sé ekki breytt og að heimilda sé getið.

Fyrri listinn var prófaður í náttúrufræði hjá 5. – 8. bekk í grunnskólum á Íslandi. Hann hefur verið notaður í ýmsum námsgreinum og á ýmsum námsstigum, þó ekki með börnum yngri en í 5. bekk. Nemendur svöruðu spurningum á pappír í tímanum.
Frekari aðferðafræðilegar upplýsingar:
https://vtechworks.lib.vt.edu/bitstream/handle/10919/64155/Schram_AB_D_2015.pdf?sequence=2

Seinni útgáfan af listanum hefur verið notuð meðal íslenskra háskólanema. Listarnir eru mjög svipaðir. Orðalag í nokkrum spurningum er miðað við eldri þátttakendur og orðið *námskeið* hefur verið sett í stað *náttúrufræði*. Auk þess hefur orðinu *kennari* í mörgum tilfellum verið breytt í *kennarar*, þar sem oft kenna fleiri en einn í sama námskeiðinu. Þessi spurningalisti var sendur út rafrænt vegna fjölda og aðstæðna (question pro), en einnig er hægt að fá nemendur til að svara á pappír í tímum. Svarhlutfall gæti þá væntanlega orðið hærra. Grein með aðferðafræðilegum upplýsingum er í mótun.

Skilgreiningar á þáttum úr MUSIC módeli í spurningum:
1. Empowerment - Valdefling
2. Usefulness - Gagnsemi
3. Success – Góður árangur
4. Empowerment
5. Caring - Umhyggja
6. Usefulness
7. Success
8. Empowerment
9. Success
10. Interest - Áhugi
11. Caring
12. Interest
13. Success
14. Empowerment
15. Caring
16. Interest
17. Caring
18. Usefulness

Leiðbeiningar fyrir MMAMI-Icelandic- yngri:

Markmið með fyrirlögn spurningalistans er athuga hvort fimm þættir sem tengjast áhugahvöt, þ.e. valdefling, gagnsemi, góður árangur, áhugi og umhyggja, séu til staðar í kennsluumhverfi nemenda. Niðurstöður eru leiðbeinandi fyrir kennara varðandi mótun á kennsluaðferðum og öðru er snertir kennsluumhverfið þannig að áhugahvöt nemenda aukist og þeir verði virkari í námi. Auk þess geta rannsakendur notað spurningalistann í stærri rannsóknum á áhugahvöt.

Nemendur gætu fyllt út listann á síðustu 10 – 15 mínútum kennslustundarinnar. Sumir nemendur gætu þurft á því að halda að lesið væri fyrir þá. Kennarinn í þeirri námsgrein sem verið er að spyrja um má þó ekki lesa eða aðstoða nemandann þar sem hann sér hvaðan svörin koma.

Sá sem leggur könnunina fyrir nemendur les eða segir eitthvað á þessa leið:

Okkur langar til að vita hvað ykkur finnst um námið, hvort ykkur finnst þið vera að ná árangri og hvort þið reiknið með að hafa gagn af því í framtíðinni. Við notum upplýsingarnar frá ykkur til að gera námið og skólana okkar, í heild, ennþá betri. Það er ekki skylda að taka þátt en við yrðum mjög þakklát ef þið væruð tilbúin til að vera með og hafa áhrif. Þið skuluð ekki skrifa nafnið ykkar á blaðið því að það á ekki að vera hægt að vita hver á hvaða blað. Við biðjum ykkur að svara heiðarlega því sem ykkur finnst. Þegar þið eruð búin að fylla út blaðið, setjið þið það í umslagið sem er við dyrnar um leið og þið farið út. Reynið að fara hljóðlega svo þið trufjið engan sem er enn að fylla út könnunina.
Kærar þakkir fyrir þátttökuna.

MMAMI-Icelandic – spurningalisti – yngri (ca. 11 – 18 ára)

Þessi atriði eru um _____tímana í vetur.
Veldu stig á skalanum frá 1 og upp í 6.

1 Mjög ósammála	2 Ósammála	3 Nokkuð ósammála	4 Nokkuð sammála	5 Sammála	6 Mjög sammála

1. _____Ég hef svolítið val um hvað ég geri í _____-tímum.
2. _____Það sem ég læri í _____-tímum er mikilvægt fyrir framtíð mína.
3. _____Ég get fengið háa einkunn í _____ (námsgrein).
4. _____Ég hef frelsi til að klára vinnuna í _____(námsgr.) á minn eigin hátt.
5. _____ _____(námsgrein) - kennarinn minn sýnir mér virðingu.
6. _____Mér finnst ég almennt hafa gagn af því sem ég er að læra í _____
7. _____Ég er viss um að ég get náð góðum árangri í _____
8. _____Ég ræð því hvernig ég vinn með eða læri námsefnið.
9. _____Mér finnst ég geti náð góðum árangri í _____
10. _____Ég hef áhuga á námsefninu í _____
11. _____ _____kennarinn er tilbúinn til að hjálpa mér ef ég þarf á hjálp að halda.
12. _____Ég hef ánægju af að sinna vinnunni í _____
13. _____Mér finnst ég geti ráðið við það sem ég á að gera í _____.
14. _____Ég get klárað vinnuna í _____ á ýmsan hátt.
15. _____ _____kennarinn minn vill að mér gangi vel í tímum.
16. _____Vinnan í _____-tímum heldur athygli minni.
17. _____ _____kennarinn minn er vingjarnlegur.
18. _____Mér finnst vinnan og námið í _____-tímum vera þýðingarmikið fyrir
       framtíðina.

MMAMI-Icelandic – spurningalisti – (eldri en 18 ára)

Þessi atriði eiga við _____ (námskeið/námsgrein) í vetur.
Veldu stig á skalanum frá 1 og upp í 6.

1 Mjög ósammála	2 Ósammála	3 Nokkuð ósammála	4 Nokkuð sammála	5 Sammála	6 Mjög sammála

1. Ég hef nokkurt val um það hvernig ég næ markmiðum námskeiðins.
2. Það sem ég læri í námskeiðinu er mikilvægt fyrir framtíð mína.
3. Ég get náð góðri lokaeinkunn í þessu námskeiði.
4. Ég hef frelsi til að klára verkefni námskeiðsins á minn eigin hátt.
5. Kennarar í námskeiðinu sýna mér virðingu.
6. Mér finnst ég hafa gagn af því sem ég er að læra í námskeiðinu.
7. Ég er viss um að ég get náð góðum árangri í námskeiðinu.
8. Ég ræð því hvernig ég vinn með eða læri námsefnið.
9. Mér finnst ég geti náð góðum árangri í námskeiðinu.
10. Ég hef áhuga á námsefninu í námskeiðinu.
11. Kennarar eru almennt tilbúnir til að hjálpa mér ef ég þarf á hjálp að halda.
12. Ég hef ánægju af að sinna náminu í námskeiðinu.
13. Mér finnst ég geti ráðið við það sem ég er að gera í tímum.
14. Ég get lokið verkefnum í námskeiðinu á ýmsan hátt.
15. Kennararnir vilja að mér gangi vel í námskeiðinu.
16. Það sem við erum að gera í tímum heldur athygli minni.
17. Kennararnir í námskeiðinu eru vingjarnlegir.
18. Mér finnst vinnan í námskeiðinu vera þýðingarmikil fyrir framtíð mína.

MUSIC® Inventory (Korean translation of the College Student version)

Purpose

The purpose of the Korean translation of the College Student version of the MUSIC Inventory is make the MUSIC Inventory accessible to individuals who speak Korean. The initial translator for this version was EunSoo Park from South Korea. The translation was back-translated to English by Dr. Hyuksoo Kwon and checked by Brett Jones.

Instructions for Administering This Version

Please closely follow the instruction in the "Instructions for Administering the College Student version of the MUSIC Inventory" section of this document.

Instructions for Scoring the MUSIC Inventory (College Student version)

To obtain a score for each scale, average the values for the items in the scales as shown below.

Empowerment score = (item 2 + item 8 + item 12 + item 17 + item 26) / 5
Usefulness score = (item 3 + item 5 + item 19 + item 21 + item 23) / 5
Success score = (item 7 + item 10 + item 14 + item 18) / 4
Interest score = (item 1 + item 6 + item 9 + item 11 + item 13 + item 15) / 6
Caring score = (item 4 + item 16 + item 20 + item 22 + item 24 + item 25) / 6

Other important notes:
- Do not sum or average all 26 items because this produces a meaningless value. It is inconsistent with the principles of the MUSIC model to assume that motivation is the sum of empowerment, usefulness, success, interest, and caring. Although this may be true in some cases, it is possible that a student is highly motivated and engaged when she is high on only one or two of the MUSIC components and low on the others.

Validity Evidence

Validity evidence for this translation is ongoing. Because it is a direct translation of the English version of the MUSIC Inventory, it is likely that this version will demonstrate acceptable validity.

The inventories are provided on the following pages.

본 설문 문항에서 언급되는 수업 또는 교수는 현재 수강하고 있는 수업의 교수와 수업을 의미합니다. 또한 "수업"은 수업에서 이루어진 과제, 활동, 읽기 등을 포함한 모든 수업 활동을 의미합니다. 설문 문항에 대한 응답은 옳고 틀린 대답이 없습니다. 솔직하게 응답해 주시면 감사하겠습니다.

아래의 척도를 사용하여 문항의 동의 정도를 표시해주세요.

1 매우 동의하지 않는다.	2 동의하지 않는다	3 조금 동의하지 않는다	4 조금 동의한다	5 동의한다	6 매우 동의한다.

_____ 1. 수업은 나의 관심을 끈다

_____ 2. 나는 수업 목표를 어떻게 달성할 지에 대해 스스로 결정할 수 있는 기회가 있다.

_____ 3. 수업은 전반적으로 유용하다.

_____ 4. 교수는 수업에 관한 내 질문에 대해 대답해 준다.

_____ 5. 수업은 나한테 도움이 된다.

_____ 6. 수업에서 사용된 교수 방법은 나의 관심을 끈다.

_____ 7. 나는 이 수업을 잘 해낼 자신이 있다.

_____ 8. 나는 내가 원하는 방식대로 수업 활동을 할 수 있는 자유가 있다.

_____ 9. 나는 이 수업에서 사용되는 교수방법이 좋다.

_____ 10. 나는 이 수업에서의 학업적인 도전을 성공적으로 해 낼 수 있을 것 같다.

_____ 11. 수업 방법은 나를 수업에 참여하게끔 한다.

_____ 12. 나는 수업 목표를 어떤 식으로 성취할지 선택할 수 있다.

_____ 13. 나는 수업을 해나가는 것이 즐겁다.

_____ 14. 나는 이 수업에서 높은 성적을 받을 수 있다.

_____ 15. 나는 이 수업이 재미있다.

_____ 16. 교수는 내가 수업에서 도움이 필요하면 언제든지 나를 도와준다.

_____ 17. 수업내용을 어떻게 배울 지에 대해 내가 결정 할 수 있다.

_____ 18. 수업을 하면서 내가 수업에서 잘 해 낼 수 있을 것이라 느꼈다.

_____ 19. 나는 이 수업이 나의 미래와 관련 있다고 생각한다.

_____ 20. 교수는 내가 수업에서 잘하고 있는지 관심을 가지고 있다.

_____ 21. 나는 이 수업에서 배운 지식을 사용할 수 있을 것이다.

_____ 22. 교수는 나를 존중해준다.

_____ 23. 이 수업에서 배우는 지식은 나의 미래를 위해 중요하다.

_____ 24. 교수는 친근하다.

_____ 25. 나는 교수가 나의 감정을 배려하고 있다고 생각한다.

_____ 26. 내가 이 수업에서 무엇을 해야하는지에 대해서는 탄력적이다.

MUSIC® Inventory (Korean translation of the Middle/High School Student version)

Purpose

The purpose of the Korean translation of the Middle/High School Student version of the MUSIC Inventory is make the MUSIC Inventory accessible to individuals who speak Korean. The initial translator for this version was EunSoo Park from South Korea. The translation was back-translated to English by Dr. Hyuksoo Kwon and checked by Brett Jones. The items on the following pages are in the same order as the items in the Middle/High School English version in this document.

Instructions for Scoring the MUSIC Inventory (Middle/High School Student version)

To obtain a score for each scale, average the values for the items in the scales as shown below.

Empowerment score = (item 5 + item 12 + item 16 + item 18) / 4
Usefulness score = (item 1 + item 9 + item 13) / 3
Success score = (item 2 + item 4 + item 7 + item 10) / 4
Interest score = (item 6 + item 8 + item 17) / 3
Caring score = (item 3 + item 11 + item 14 + item 15) / 4

Other important notes:
- Do not sum or average all 18 items because this produces a meaningless value. It is inconsistent with the principles of the MUSIC model to assume that motivation is the sum of empowerment, usefulness, success, interest, and caring. Although this may be true in some cases, it is possible that a student is highly motivated and engaged when she is high on only one or two of the MUSIC components and low on the others.

Validity Evidence

Validity evidence for this translation is ongoing. Because it is a direct translation of the English version of the MUSIC Inventory, it is likely that this version will demonstrate acceptable validity.

The inventory is provided on the following pages.

본 설문 문항에서 언급되는 수업 또는 교수는 현재 수강하고 있는 수업의 교수와 수업을 의미합니다. 또한 "수업"은 수업에서 이루어진 과제, 활동, 읽기 등을 포함한 모든 수업 활동을 의미합니다. 설문 문항에 대한 응답은 옳고 틀린 대답이 없습니다. 솔직하게 응답해 주시면 감사하겠습니다.

아래의 척도를 사용하여 문항의 동의 정도를 표시해주세요.

1	2	3	4	5	6
매우 동의하지 않는다.	동의하지 않는다	조금 동의하지 않는다	조금 동의한다	동의한다	매우 동의한다.

_____ 1. 이 수업에서 배우는 지식은 나의 미래를 위해 중요하다.

_____ 2. 나는 이 수업을 잘 해낼 자신이 있다.

_____ 3. 교수는 내가 수업에서 잘하고 있는지 관심을 가지고 있다.

_____ 4. 나는 이 수업에서 높은 성적을 받을 수 있다.

_____ 5. 나는 내가 원하는 방식대로 수업 활동을 할 수 있는 자유가 있다.

_____ 6. 나는 이 수업이 재미있다.

_____ 7. 나는 이 수업에서의 학업적인 도전을 성공적으로 해 낼 수 있을 것 같다.

_____ 8. 나는 수업을 해나가는 것이 즐겁다.

_____ 9. 수업은 전반적으로 유용하다.

_____ 10. 수업을 하면서 내가 수업에서 잘 해 낼 수 있을 것이라 느꼈다.

_____ 11. 교수는 친근하다.

_____ 12. 내가 이 수업에서 무엇을 해야하는지에 대해서는 탄력적이다.

_____ 13. 나는 이 수업이 나의 미래와 관련 있다고 생각한다.

_____ 14. 교수는 내가 수업에서 도움이 필요하면 언제든지 나를 도와준다.

_____ 15. 교수는 나를 존중해준다.

_____ 16. 수업내용을 어떻게 배울 지에 대해 내가 결정 할 수 있다.

_____ 17. 수업은 나의 관심을 끈다

_____ 18. 는 수업 목표를 어떤 식으로 성취할지 선택할 수 있다.

MUSIC® Inventory (Polish translation of the College Student version)

Purpose

The purpose of the Polish translation of the College Student version of the MUSIC Inventory is make the MUSIC Inventory accessible to individuals who speak Polish. The translator for this version was Dr. Robert Gajewski (Warsaw University of Technology, Poland). The translation was back-translated to English by a Polish citizen and checked by Brett Jones. The English items on the following pages are not the back-translations; rather, they are the original English items.

Instructions for Administering This Version

Please closely follow the instruction in the "Instructions for Administering the College Student version of the MUSIC Inventory" section of this document.

Instructions for Scoring the MUSIC Inventory (College Student version)

To obtain a score for each scale, average the values for the items in the scales as shown below.

Empowerment score = (item 2 + item 8 + item 12 + item 17 + item 26) / 5
Usefulness score = (item 3 + item 5 + item 19 + item 21 + item 23) / 5
Success score = (item 7 + item 10 + item 14 + item 18) / 4
Interest score = (item 1 + item 6 + item 9 + item 11 + item 13 + item 15) / 6
Caring score = (item 4 + item 16 + item 20 + item 22 + item 24 + item 25) / 6

Other important notes:
- Do not sum or average all 26 items because this produces a meaningless value. It is inconsistent with the principles of the MUSIC model to assume that motivation is the sum of empowerment, usefulness, success, interest, and caring. Although this may be true in some cases, it is possible that a student is highly motivated and engaged when she is high on only one or two of the MUSIC components and low on the others.

Validity Evidence

No studies have been conducted to assess the validity evidence for this Polish translation. However, it can be used for teaching purposes. If you conduct research and collect validity evidence with this version, please contact Brett Jones and he will report your findings here.

The inventory is provided on the following pages.

MUSIC Inventory – English version **(College Student version, past tense)** (to be administered near the end of a course)	MUSIC Inventory – Polish version **(wersja dla studentów, czas przeszły)** (do przeprowadzenia pod koniec kursu)
Instructions Please rate the items in this section using the following scale: 1 = Strongly disagree 2 = Disagree 3 = Somewhat disagree 4 = Somewhat agree 5 = Agree 6 = Strongly agree Note that the word "coursework" refers to anything that you did in the course, including assignments, activities, readings, etc.	Instrukcje Oceń poszczególne stwierdzenia używając poniższej skali 1 = Absolutnie nie zgadzam się 2= Nie zgadzam się 3= Trochę nie zgadzam się 4= Trochę zgadzam się 5= Zgadzam się 6= W pełni się zgadzam Zauważ, że termin „zajęcia" nie odnosi się jedynie do wykładów i ćwiczeń, ale do wszystkiego co robisz w ramach kursu włączając w to prace domowe, aktywności, lektury.
1. The coursework held my attention. 2. I had the opportunity to decide for myself how to meet the course goals. 3. In general, the coursework was useful to me. 4. The instructor was available to answer my questions about the coursework. 5. The coursework was beneficial to me. 6. The instructional methods used in this course held my attention. 7. I was confident that I could succeed in the coursework. 8. I had the freedom to complete the coursework my own way. 9. I enjoyed the instructional methods used in this course. 10. I felt that I could be successful in meeting the academic challenges in this course. 11. The instructional methods engaged me in the course. 12. I had options in how to achieve the goals of the course. 13. I enjoyed completing the coursework. 14. I was capable of getting a high grade in this course. 15. The coursework was interesting to me. 16. The instructor was willing to assist me if I needed help in the course. 17. I had control over how I learned the course content. 18. Throughout the course, I felt that I could be successful on the coursework. 19. I found the coursework to be relevant to my future. 20. The instructor cared about how well I did in this course. 21. I will be able to use the knowledge I gained in this course.	1 Zajęcia w kursie przykuły moją uwagę 2 Miałem okazję sam decydować o tym, jak osiągnąć cele kursu 3 Ogólnie, zajęcia były dla mnie przydatne 4 Prowadzący był dostępny, aby odpowiedzieć na moje pytania dotyczące zajęć 5 Zajęcia przyniosły mi korzyści 6 Metody kształcenia stosowane w tym kursie zwróciły moją uwagę 7 Byłem przekonany, że mogę odnieść sukces w zajęciach 8 Miałem swobodę realizacji i ukończenia zajęć na swój własny sposób 9 Podobały mi się metody kształcenia stosowane w tym kursie 10 Czułem, że mogę odnieść sukces w sprostaniu wyzwaniom akademickim w tym kursie 11 Metody kształcenia zaangażowały mnie w kurs 12 Miałem opcje, w jaki sposób osiągnąć cele kursu 13 Uczestnictwo w kursie sprawiło mi przyjemność 14 Byłem w stanie uzyskać wysoką ocenę na tym kursie 15 Zajęcia były dla mnie interesujące 16 Prowadzący chętnie mi pomagał, gdy potrzebowałem pomocy podczas kursu 17 Miałem kontrolę nad tym, jak poznawałem treść kursu 18 Przez cały kurs czułem, że mogę odnieść sukces w realizacji zadań 19 Stwierdziłem, że te zajęcia mają znaczenie dla mojej przyszłości 20 Prowadzący dbał o to, jak dobrze wypadłem w tym kursie 21 Będę mógł wykorzystać wiedzę zdobytą na tym kursie 22 Prowadzący szanował mnie

Jones, B. D. (2012/2020, September). *User guide for assessing the components of the MUSIC® Model of Motivation*. Retrieved from http://www.theMUSICmodel.com

22. The instructor was respectful of me. 23. The knowledge I gained in this course is important for my future. 24. The instructor was friendly. 25. I believe that the instructor cared about my feelings. 26. I had flexibility in what I was allowed to do in this course.	23 Wiedza zdobyta na tym kursie jest ważna dla mojej przyszłości 24 Prowadzący był przyjazny 25 Wierzę, że prowadzący troszczył się o moje odczucia 26 Miałem elastyczność w tym, co mogłem zrobić w tym kursie

MUSIC® Inventory (Spanish translation of the College Student version)

Purpose

The purpose of the College Student version of the MUSIC Inventory is to measure the extent to which college students perceive the presence of each of the MUSIC model components in a college course. It can be used by professors to help them identify areas of strengths and weaknesses related to factors that affect students' motivation and engagement.

The purpose of the Spanish translation of this inventory is to make it accessible to individuals who speak Spanish. The primary translator for this version was Juan M. Cruz.

Instructions for Administering This Version

Please closely follow the instruction in the "Instructions for Administering the College Student version of the MUSIC Inventory" section of this document.

Instructions for Scoring the MUSIC Inventory (College Student version)

To obtain a score for each scale, average the values for the items in the scales as shown below.

Empowerment score = (item 2 + item 8 + item 12 + item 17 + item 26) / 5
Usefulness score = (item 3 + item 5 + item 19 + item 21 + item 23) / 5
Success score = (item 7 + item 10 + item 14 + item 18) / 4
Interest score = (item 1 + item 6 + item 9 + item 11 + item 13 + item 15) / 6
Caring score = (item 4 + item 16 + item 20 + item 22 + item 24 + item 25) / 6

Other important notes:
- Do not sum or average all 26 items because this produces a meaningless value. It is inconsistent with the principles of the MUSIC model to assume that motivation is the sum of empowerment, usefulness, success, interest, and caring. Although this may be true in some cases, it is possible that a student is highly motivated and engaged when she is high on only one or two of the MUSIC components and low on the others.

Validity Evidence

The validity evidence for the use of the Spanish translation of this version of the MUSIC Inventory with college students is very good. In a sample of 201 undergraduate engineering students, Jones, Li, and Cruz (2017) reported Cronbach's alpha values of .88 for empowerment, .93 for usefulness, .91 for success, .95 for interest, and .92 for caring. Confirmatory factor analysis showed that the five-factor model fit the data well, as demonstrated by acceptable fit indices.

The inventory is provided on the following page.

Por favor califique los ítems de esta sección con la siguiente escala:

1	2	3	4	5	6
Muy en desacuerdo	En desacuerdo	Parcialmente en desacuerdo	Parcialmente de acuerdo	De acuerdo	Muy de acuerdo

Tenga en cuenta que la palabra actividades se refiere a todas las actividades que
ha hecho en el curso incluyendo tareas, talleres, trabajos, proyectos, lecturas, etc.

_____ 1. Las actividades del curso me llaman la atención.

_____ 2. Tengo la oportunidad de decidir por mí mismo(a) cómo alcanzar los objetivos del curso.

_____ 3. En general, las actividades del curso son útiles.

_____ 4. El(la) profesor(a) está disponible para atender mis dudas relacionadas con las actividades del curso.

_____ 5. Las actividades del curso son beneficiosas para mí.

_____ 6. Me llaman la atención los métodos de enseñanza usados en este curso.

_____ 7. Confío en mi capacidad de realizar exitosamente las actividades del curso.

_____ 8. Tengo la libertad de realizar las actividades del curso a mi manera.

_____ 9. Disfruto los métodos de enseñanza utilizados en este curso.

_____ 10. Me siento en la capacidad de alcanzar los retos académicos del curso.

_____ 11. Los métodos de enseñanza me involucran (enganchan) activamente en el curso.

_____ 12. Tengo diferentes opciones para alcanzar los objetivos del curso.

_____ 13. Disfruto las actividades del curso.

_____ 14. Me consider capaz de obtener una alta calificación en este curso.

_____ 15. Las actividades del curso me parecen interesantes.

_____ 16. El(la) profesor(a) está dispuesto a ayudarme cuando lo(la) necesite.

_____ 17. Tengo control sobre cómo aprendo los contenidos del curso.

_____ 18. A lo largo del curso he sentido que puedo realizar con éxito las actividades.

_____ 19. Considero que las actividades son relevantes para mi futuro.

_____ 20. El(la) profesor(a) se preocupa por mi desempeño en el curso.

_____ 21. Seré capaz de usar los conocimientos adquiridos en este curso.

_____ 22. El(la) profesor(a) es respetuoso conmigo.

_____ 23. Los conocimientos adquiridos en este curso son importantes para mi futuro.

_____ 24. El(la) profesor(a) es amigable.

_____ 25. Creo que el(la) profesor(a) se preocupa por cómo me siento.

_____ 26. Es flexible lo que se me permite hacer en este curso.

MUSIC® Inventory (Spanish translation of the Middle/High School Student version)

Purpose

The purpose of the Middle/High School Student version of the MUSIC Inventory is to measure the extent to which middle or high school students perceive the presence of each of the MUSIC model components in a class or other learning environment. It can be used by teachers to help them identify areas of strengths and weaknesses related to factors that affect students' motivation and engagement.

I developed this version of the MUSIC Inventory by selecting items from the College Student version of the MUSIC Inventory that were most appropriate for middle and high school students. The purpose of the Spanish translation of this inventory is to make it accessible to individuals who speak Spanish. The primary translator for this version was Juan M. Cruz.

Instructions for Administering This Version

Please closely follow the instruction in the "Instructions for Administering the Middle/High School version of the MUSIC Inventory" section of this document.

Instructions for Scoring the Middle/High School version of the MUSIC Inventory

To obtain a score for each scale, average the values for the items in the scales as shown below.

Empowerment score = (item 5 + item 12 + item 16 + item 18) / 4
Usefulness score = (item 1 + item 9 + item 13) / 3
Success score = (item 2 + item 4 + item 7 + item 10) / 4
Interest score = (item 6 + item 8 + item 17) / 3
Caring score = (item 3 + item 11 + item 14 + item 15) / 4

Other important notes:
- Do not sum or average all 18 items because this produces a meaningless value. It is inconsistent with the principles of the MUSIC model to assume that motivation is the sum of empowerment, usefulness, success, interest, and caring. Although this may be true in some cases, it is possible that a student is highly motivated and engaged when she is high on only one or two of the MUSIC components and low on the others.

Validity Evidence

I have not used the Spanish translation of the MUSIC Inventory with middle/high school students. However, there is validity evidence for the middle/high school version in English and for the college version in Spanish (and this version is based on that Spanish translation (see those sections of this document). Therefore, I believe that these scales should be valid as well, although this cannot be confirmed until it is used for that purpose.

The inventory is provided on the following page.

MUSIC Inventory (Middle/High School Student version, Spanish translation)

Por favor califique los ítems de esta sección con la siguiente escala:

1	2	3	4	5	6
Muy en desacuerdo	En desacuerdo	Parcialmente en desacuerdo	Parcialmente de acuerdo	De acuerdo	Muy de acuerdo

Tenga en cuenta que la palabra actividades se refiere a todas las actividades que
ha hecho en el curso incluyendo tareas, talleres, trabajos, proyectos, lecturas, etc.

_____ 1. Los conocimientos adquiridos en este curso son importantes para mi futuro.
_____ 2. Confío en mi capacidad de realizar exitosamente las actividades del curso.
_____ 3. El(la) profesor(a) se preocupa por mi desempeño en el curso.
_____ 4. Me consider capaz de obtener una alta calificación en este curso.
_____ 5. Tengo la libertad de realizar las actividades del curso a mi manera.
_____ 6. Las actividades del curso me parecen interesantes.
_____ 7. Me siento en la capacidad de alcanzar los retos académicos del curso.
_____ 8. Disfruto las actividades del curso.
_____ 9. En general, las actividades del curso son útiles.
_____ 10. A lo largo del curso he sentido que puedo realizar con éxito las actividades.
_____ 11. El(la) profesor(a) es amigable.
_____ 12. Es flexible lo que se me permite hacer en este curso.
_____ 13. Considero que las actividades son relevantes para mi futuro.
_____ 14. El(la) profesor(a) está dispuesto a ayudarme cuando lo(la) necesite.
_____ 15. El(la) profesor(a) es respetuoso conmigo.
_____ 16. Tengo control sobre cómo aprendo los contenidos del curso.
_____ 17. Las actividades del curso me llaman la atención.
_____ 18. Tengo diferentes opciones para alcanzar los objetivos del curso.

MUSIC® Inventory (Turkish translation of the College Student version, present tense)

Purpose

The purpose of the Turkish translation of College Student version of the MUSIC Inventory is make the MUSIC Inventory accessible to individuals who speak Turkish. Dr. Sumeyra Sahbaz (Post-doctoral Fellow at Oklahoma State University) conducted the initial translation of some of the items and edited the final version of this translation. Dr. Ebru Tuncer Boon (a faculty member at Dokuz Eylül University, in İzmir, Turkey) translated some of the items for the middle/high school version and parts of those items were also used in this version. The items were back-translated to English by Sumeyra Sahbaz (except for the items she translated initially), Dr. Esma Turgut (Oklahoma State University), and Sehmuz Akalin. Brett Jones checked the back-translation, which resulted in a minor edit to one of the items. The

Instructions for Administering This Version

Please closely follow the instruction in the "Instructions for Administering the College Student version of the MUSIC Inventory" section near the beginning of this document.

Validity Evidence

Şeyda Uçar Karan is using this version of the MUSIC Inventory in Turkey. This research is ongoing, and we have no evidence yet that the translation is valid for use in Turkey. However, because it is a direct translation of the English version of the MUSIC Inventory, it is likely that this version will demonstrate acceptable validity as well.

Instructions for Scoring the MUSIC Inventory (College Student version)

To obtain a score for each scale, average the values for the items in the scales as shown below.

Empowerment score = (item 2 + item 8 + item 12 + item 17 + item 26) / 5
Usefulness score = (item 3 + item 5 + item 19 + item 21 + item 23) / 5
Success score = (item 7 + item 10 + item 14 + item 18) / 4
Interest score = (item 1 + item 6 + item 9 + item 11 + item 13 + item 15) / 6
Caring score = (item 4 + item 16 + item 20 + item 22 + item 24 + item 25) / 6

Other important notes:
- Do not sum or average all 26 items because this produces a meaningless value. It is inconsistent with the principles of the MUSIC model to assume that motivation is the sum of empowerment, usefulness, success, interest, and caring. Although this may be true in some cases, it is possible that a student is highly motivated and engaged when she is high on only one or two of the MUSIC components and low on the others.

The inventory is provided on the following page.

Yönerge

Aşağıdaki maddelerde geçen ders ve eğitmen kelimeleri bu ders ve dersin eğitmeni hakkındadır. Aşağıdaki ifadelerde geçen "calışmalar" kelimesi derste yapılan her türlü ödev, aktivite, okumalar ve benzeri çalışmaları içerir.

Bu sorulara verilen cevaplar doğru veya yanlış diye sınıflandırılamaz. Lütfen dürüsce cevap veriniz. Bazı sorular tekrar gibi görünsede, bütün soruları cevaplamanız en iyi sonuçlara ulaşmamızı sağlıcaktır.

Lütfen 1'den 6'ya kadar olan seçeneklerden birini soruların yanındaki kutuya yazınız.

1	2	3	4	5	6
Kesinlikle katılmıyorum	Katılmıyorum	Kısmen katılmıyorum	Kısmen katılıyorum	Katılıyorum	Kesinlikle katılıyorum

_____ 1. Dersteki çalışmalar ilgimi canlı tutar.

_____ 2. Dersin hedeflerine nasıl ulaşacağım konusunda karar verme özgürlüğüm var.

_____ 3. Dersteki çalışmalar benim için genellikle yararlıdır.

_____ 4. Dersin eğitmeni ders hakkindaki sorularımı cevaplamak üzere hazır ve ulaşılır.

_____ 5. Dersteki çalışmalar benim için faydalıdır.

_____ 6. Derste kullanılan öğretme yontemleri ilgimi canlı tutuyor.

_____ 7. Derste başarılı olacağıma inanıyorum.

_____ 8. Dersteki çalışmalarımı istediğim yolla tamamlama özgürlüğüm vardır.

_____ 9. Derste kullanılan öğretme yöntemleri hoşuma gidiyor.

_____ 10. Dersteki akademik zorlukları karşılamada başarılı olabileceğimi düşünüyorum.

_____ 11. Derste kullanılan öğretme yöntemleri derse katilmami sağlıyor.

_____ 12. Dersin hedeflerine nasıl ulaşacağım konusunda seçeneklerim vardır.

_____ 13. Dersin çalışmalarıni bitirmekten zevk alırım.

_____ 14. Dersten yüksek not almak icin yeterince iyim.

_____ 15. Dersin çalışmalari benim için ilginçtir.

_____ 16. Derste yardıma ihtiyaç duyduğum zaman egitmen bana yardımcı olmaya isteklidir.

_____ 17. Derste işlenen konuyu nasıl öğreneceğime karar verebilirim.

_____ 18. Ders boyunca sınıf çalışmalarında başarılı olacağımı hissederim.

_____ 19. Dersteki çalışmaları geleceğimle alakalı buluyorum.

_____ 20. Dersin egitmeni derste ne kadar iyi olduğuma önem verir.

_____ 21. Derste öğrendigim bilgileri kullanabileceğim.

_____ 22. Dersin egitmeni bana saygılıdır.

_____ 23. Derste kazandığım bilgiler geleceğim için önemlidir.

_____ 24. Dersin egitmeni cana yakındır.

_____ 25. Dersin eğitmeninin his ve duygularımı önemsediğine inanıyorum.

_____ 26. Derste yapmam gerekenler arasından seçme şansım vardır.

MUSIC® Inventory (Turkish translation of the Middle/High School version)

Purpose

The purpose of the Turkish translation of the Middle/High School Student version of the MUSIC Inventory is make the MUSIC Inventory accessible to individuals who speak Turkish. The initial translator for this version was Dr. Ebru Tuncer Boon, a faculty member at Dokuz Eylül University, in İzmir, Turkey. It was back-translated to English by Dr. Sumeyra Sahbaz and Sehmuz Akalin. Brett Jones checked the back-translation, which resulted in a minor edit to one of the items.

Instructions for Administering This Version

Please closely follow the instruction in the "Instructions for Administering the Middle/High School version of the MUSIC Inventory" section of this document.

Validity Evidence

Ebru Tuncer Boon is using this version of the MUSIC Inventory in Turkey. This research is ongoing and we have no evidence yet that the translation is valid for use in Turkey. However, because it is a direct translation of the English version of the MUSIC Inventory, it is likely that this version will demonstrate acceptable validity as well.

Instructions for Scoring the MUSIC Inventory (Middle/High School Student version)

To obtain a score for each scale, average the values for the items in the scales as shown below.

Empowerment score = (item 5 + item 12 + item 16 + item 18) / 4
Usefulness score = (item 1 + item 9 + item 13) / 3
Success score = (item 2 + item 4 + item 7 + item 10) / 4
Interest score = (item 6 + item 8 + item 17) / 3
Caring score = (item 3 + item 11 + item 14 + item 15) / 4

Other important notes:
- Do not sum or average all 18 items because this produces a meaningless value. It is inconsistent with the principles of the MUSIC model to assume that motivation is the sum of empowerment, usefulness, success, interest, and caring. Although this may be true in some cases, it is possible that a student is highly motivated and engaged when she is high on only one or two of the MUSIC components and low on the others.

The inventory is provided on the following page.

Yönerge

Aşağıda bulunan 18 soru şu anda aldığınız <u>FEN BİLİMLERİ DERSİ</u> VE <u>FEN BİLİMLERİ ÖĞRETMENİ</u> ile ilgilidir.

Lütfen 1'den 6'ya kadar olan seçeneklerden birini soruların yanındaki kutuya yazınız.

1	2	3	4	5	6
Kesinlikle katılmıyorum	Katılmıyorum	Kısmen katılmıyorum	Kısmen katılıyorum	Katılıyorum	Kesinlikle katılıyorum

_____ 1. Fen Bilimleri dersinde kazandığım bilgiler geleceğim için önemlidir.

_____ 2. Fen Bilimleri dersinde başarılı olacağıma inanıyorum.

_____ 3. Fen Bilimleri öğretmenim fen bilimleri dersinde ne kadar iyi olduğuma önem verir.

_____ 4. Fen Bilimleri dersinden yüksek not almaya yeterliyim.

_____ 5. Fen Bilimleri dersindeki çalışmalarımı istediğim yolla tamamlama özgürlüğüm
vardır.

_____ 6. Fen Bilimleri dersindeki çalışmalar benim için ilginçtir.

_____ 7. Fen Bilimleri dersinde akademik zorlukları karşılamada başarılı olabileceğimi
düşünüyorum.

_____ 8. Fen Bilimleri dersinde sınıf çalışmalarına katılmaktan zevk alırım.

_____ 9. Genellikle, Fen Bilimleri dersindeki çalışmalar benim için yararlıdır.

_____ 10. Fen Bilimleri dersi boyunca, sınıf çalışmalarında başarılı olacağımı hissederim.

_____ 11. Fen Bilimleri öğretmenim cana yakındır.

_____ 12. Fen Bilimleri dersinde yapmam gerekenler arasından seçme şansım vardır.

_____ 13. Fen Bilimleri dersindeki çalışmaları geleceğimle alakalı buluyorum.

_____ 14. Fen Bilimleri dersinde yardıma ihtiyaç duyduğum zaman öğretmenim bana
yardımcı olmaya isteklidir.

_____ 15. Fen Bilimleri öğretmenim bana saygılıdır.

_____ 16. Fen Bilimleri dersinde işlenen konuyu nasıl öğreneceğimi kontrol edebilirim.

_____ 17. Fen Bilimleri dersindeki çalışmalar ilgimi canlı tutar.

_____ 18. Fen Bilimleri sınıfındaki hedeflere nasıl ulaşacağım konusunda seçeneklerim
vardır.

MUSIC® Inventory (Cognitive Training version for clients)

Purpose

The purpose of the Cognitive Training version for clients is to measure the extent to which clients perceive the presence of each of the MUSIC model components in a clinical environment. It can be used by clinicians to help them identify areas of strengths and weaknesses related to factors that affect clients' motivation and engagement while participating in cognitive training sessions intended to provide cognitive remediation for patients with psychological disorders (see Medalia, Revheim, & Herlands, 2009, for examples of the types of clinics to which I am referring).

This version of the MUSIC Inventory is almost identical to the Middle/High School Student version of the MUSIC Inventory except that I worked with Dr. Alice Medalia and Marie Hansen at Columbia University to change the wording of the items to make them appropriate for use with patients in clinical settings.

Instructions for Administering the Cognitive Training version of the MUSIC Inventory

- Title the inventory as general as possible, such as "Cognitive Training Questionnaire," and delete the title text above the words "Completed by" in the examples on the following pages. Titling the inventory as "motivation" or something similar could affect clients' responses because of their preconceived notions of this word.
- **Order the items randomly**. The versions in this guide are already ordered randomly and can be used in the order shown. But if you administer the inventory online and your online survey software has the feature, I recommend that you have the software randomize the questions differently for each student.
- For the 1 to 6 rating scale, **provide each number** along with the associated description (e.g., 1 = *disagree*). The scale is presented correctly in this guide.
- The items are worded in the present tense if the inventory is administered at the beginning or middle of the cognitive training sessions. For example, if the sessions occur once a week for 40 weeks, then the present tense version could be administered at the end of Week 1 or any week thereafter until Week 40. The past tense version should be used near the end of the sessions, around Week 39 or 40. Both of these versions are presented on the following pages.
- **Do not interpret any of the items** for the clients, they must make their own interpretation of the items. If they ask you what an item means, say something like: "Answer it based on whatever you think it means."
- Responses can be collected through online survey software (e.g., Survey Monkey, Qualtrics) or on a paper version of the inventory. Studies have not been conducted to determine how the format of the items (online versus paper) affects students' responses. Avoid displaying the numbers and labels in ways that present them as different distances apart because the distance between the items is assumed to be equal (e.g., the distance from 1 to 2 is assumed to be the same as the distance from 4 to 5). As an example, when spaced horizontally, avoid having the spacing width of the option for "1 = Strongly Disagree" larger than the width for the option for "2 = Disagree" because there are more letters in the "Strongly Disagree" label. Make the column widths for the options the same. If you administer it online, I recommend avoiding this issue by **presenting the options vertically** as shown here because the distance between the rows is equal.

To complement the scores from the MUSIC Inventory, clinicians can administer open-ended items to clients, such as those provided below. There is one item for each of the MUSIC model components. These items are based on similar questions from Jones et al. (2012).

1. What could be changed in this training to make you feel you had more control over your learning?
2. What could be changed in this training to make it more useful to you?
3. What could be changed in this training to help you feel you could be more successful in it?
4. What could be changed in this training to make it more interesting and enjoyable?
5. What could be changed in this training to make you feel that the coach cares about whether you succeed at your goals?

Validity Evidence

The Cognitive Training version for clients has been used in the U.S. and translated to Danish and Japanese. We have published articles using data from several clinical sites and found that the scores produced from this version are valid for use with this population.

- Hansen, M. C., Jones, B. D., Eack, S. M., Glenthoj, L. B., Ikezawa, S., Iwane, T., …Medalia, A. (2019). Validation of the MUSIC Model of Motivation Inventory for use with cognitive training for schizophrenia spectrum disorders: A multinational study. *Schizophrenia Research, 206*, 142-148. doi:10.1016/j.schres.2018.11.037
  - Cronbach's alpha values for the entire sample ($n = 181$) were .81 for empowerment, .81 for usefulness, .88 for success, .85 for interest, and .85 for caring.
- Saperstein, A. M., Jones, B. D., Hansen, M. C., & Medalia, A. (2020). The Cognitive Training version of the MUSIC® Model of Motivation Inventory: A follow-up validity study. *Schizophrenia Research, 216*, 516-519. doi:10.1016/j.schres.2019.12.027

The inventory is provided on the following pages.

MUSIC Inventory (Cognitive Training version for clients, present tense)
(to be administered near the beginning or middle of the cognitive training sessions)

Completed by: _____   **Date: _____**

Directions

These items ask about your experience in COGNITIVE TRAINING up to this point. Consider everything you do in cognitive training when selecting your answer including cognitive exercises, discussion, and talking with the instructor. There are no right or wrong answers - we are only interested in your honest opinion.

The questions ask you to select a number for your answer. Please circle the number that best describes what you believe about each statement.

1. The skills I gain in Cognitive Training are important for my future.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

2. I am confident I can succeed in Cognitive Training activities.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

3. My Cognitive Training instructor cares about how well I do.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

4. I am capable of doing well in the activities during Cognitive Training.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

5. I have the freedom to work on the activities in Cognitive Training in my own way.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

6. The Cognitive Training activities are interesting to me.

1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Somewhat Agree	5 Agree	6 Strongly Agree

7. I feel that I can be successful at meeting the cognitive challenges in Cognitive Training.

1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Somewhat Agree	5 Agree	6 Strongly Agree

8. I enjoy completing the activities in Cognitive Training.

1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Somewhat Agree	5 Agree	6 Strongly Agree

9. In general, Cognitive Training activities are useful to me.

1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Somewhat Agree	5 Agree	6 Strongly Agree

10. During Cognitive Training, I feel that I can be successful in the activities.

1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Somewhat Agree	5 Agree	6 Strongly Agree

11. My Cognitive Training instructor is friendly.

1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Somewhat Agree	5 Agree	6 Strongly Agree

12. I have choices in what I am allowed to do in Cognitive Training.

1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Somewhat Agree	5 Agree	6 Strongly Agree

13. I find Cognitive Training to be relevant for what I want to do in the future.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

14. My Cognitive Training instructor is willing to assist me if I need help.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

15. My Cognitive Training instructor is respectful of me.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

16. I have control over the way I practice skills in Cognitive Training.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

17. The Cognitive Training activities hold my attention.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

18. I have options in how to achieve better cognitive skills in Cognitive Training.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

<u>MUSIC Inventory (Cognitive Training version for clients, past tense)</u>
(to be administered near the <u>end</u> of the cognitive training sessions)

Completed by: _____   **Date: _____**

<u>Directions</u>

These items ask about your experience in the COGNITIVE TRAINING up to this point. Consider everything you have done in cognitive training when selecting your answer including cognitive exercises, discussion, and talking with the instructor. There are no right or wrong answers - we are only interested in your <u>honest opinion</u>.

The questions ask you to select a number for your answer. Please circle the number that best describes what <u>you believe</u> about each statement.

1. **The skills I gained in Cognitive Training are important for my future.**

1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Somewhat Agree	5 Agree	6 Strongly Agree

2. **I was confident that I could succeed in Cognitive Training activities.**

1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Somewhat Agree	5 Agree	6 Strongly Agree

3. **My Cognitive Training instructor cared about how well I did in Cognitive Training.**

1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Somewhat Agree	5 Agree	6 Strongly Agree

4. **I felt capable of doing well in the activities during Cognitive Training.**

1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Somewhat Agree	5 Agree	6 Strongly Agree

5. **I had the freedom to work on the activities in Cognitive Training in my own way.**

1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Somewhat Agree	5 Agree	6 Strongly Agree

6. The Cognitive Training activities were interesting to me.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

7. I felt that I could be successful at meeting the cognitive challenges in Cognitive Training.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

8. I enjoyed completing the activities in Cognitive Training.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

9. In general, the Cognitive Training activities were useful to me.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

10. During Cognitive Training, I felt that I could be successful in the activities.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

11. My Cognitive Training instructor was friendly.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

12. I had choices in what I was allowed to do in Cognitive Training.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

13. I found Cognitive Training to be relevant for what I want to do in the future.

1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Somewhat Agree	5 Agree	6 Strongly Agree

14. My Cognitive Training instructor was willing to assist me if I needed help during the activities.

1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Somewhat Agree	5 Agree	6 Strongly Agree

15. My Cognitive Training instructor was respectful of me.

1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Somewhat Agree	5 Agree	6 Strongly Agree

16. I had control over the way I practiced skills in Cognitive Training.

1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Somewhat Agree	5 Agree	6 Strongly Agree

17. The Cognitive Training activities held my attention.

1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Somewhat Agree	5 Agree	6 Strongly Agree

18. I had options in how to achieve better cognitive skills in Cognitive Training.

1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Somewhat Agree	5 Agree	6 Strongly Agree

Instructions for Scoring the MUSIC Inventory (Cognitive Training version for clients)

Score each MUSIC component by averaging the values from each item in the scale to produce a mean for the scale. For example, the "usefulness" score = (item 1 + item 9 + item 13) / 3

- eMpowerment = 5, 12,16,18
- Usefulness = 1, 9, 13
- Success = 2, 4, 7, 10
- Interest (situational) = 6, 8, 17
- Caring = 3, 11, 14, 15

Other important notes:

- Do not sum or average all 18 items because this produces a meaningless value. It is inconsistent with the principles of the MUSIC model to assume that motivation is the sum of empowerment, usefulness, success, interest, and caring. Although this may be true in some cases, it is possible that a person is highly motivated and engaged when he or she is high on only one or two of the MUSIC components and low on the others.

Scales	Items by Scale
Empowerment (4 items)	• I have the freedom to work on the activities in Cognitive Training in my own way. • I have choices in what I am allowed to do in Cognitive Training. • I have control over the way I practice skills in Cognitive Training. • I have options in how to achieve better cognitive skills in Cognitive Training.
Usefulness (3 items)	• The skills I gain in Cognitive Training are important for my future. • In general, the Cognitive Training activities are useful to me. • I find Cognitive Training to be relevant for what I want to do in the future.
Success (4 items)	• I am confident I can succeed in Cognitive Training activities. • I am capable of doing well in the activities during Cognitive Training. • I feel that I can be successful at meeting the cognitive challenges in Cognitive Training. • During Cognitive Training, I feel that I can be successful in the activities.
Interest (3 items)	• The Cognitive Training activities are interesting to me. • I enjoy completing the activities in Cognitive Training. • The Cognitive Training Group activities hold my attention.
Caring (4 items)	• My Cognitive Training instructor cares about how well I do in the group. • My Cognitive Training instructor is friendly • My Cognitive Training instructor is willing to assist me if I need help. • My Cognitive Training instructor is respectful of me.

MUSIC® Inventory (Cognitive Training version for clinicians)

Purpose

The purpose of the Cognitive Training version for clinicians is to measure the extent to which clinicians believe that clients perceive the presence of each of the MUSIC model components in the cognitive training sessions. The clinician version is different from the client version of the inventory because it is administered to the clinician instead of the client (clinicians can administer it to themselves). I use the term "clinician" for this version as a broad term to include clinicians, therapists, assistants, and anyone who is involved in implementing the training for clients.

The clinician version can be used to identify areas of strengths and weaknesses related to factors that affect clients' motivation and engagement. It is intended to be used as a reflection tool along with other sources of data, such as the client version of the MUSIC Inventory. The items are almost identical to the client version except I changed the wording to make them appropriate for a clinician to answer.

Instructions for Administering the Clinician version of the MUSIC Inventory

The instructions for this version are the same as the instructions provided above in the section titled "Instructions for Administering the Cognitive Training version of the MUSIC Inventory."

Validity Evidence

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

The inventory is provided on the following page.

MUSIC Inventory (Cognitive Training version for clinicians)

Directions

Think of a cognitive training group for which you want to assess clients' motivation. Consider everything that is done in the group when selecting your answer, including cognitive exercises, discussion, and talking with the instructor. (The term "instructor" is used to denote the person or people leading the group. You may or may not be the instructor for the group you are about to rate now.)

There are no right or wrong answers, we are only interested in your honest opinion. Respond to the items below in relation to one Cognitive Training group using this scale:

1 Strongly disagree	2 Disagree	3 Somewhat disagree	4 Somewhat agree	5 Agree	6 Strongly agree

Clients believe that:

_____ 1. the skills they gain in Cognitive Training are important for their future.

_____ 2. they are confident that they can succeed in the Cognitive Training activities.

_____ 3. the Cognitive Training instructor cares about how well they do.

_____ 4. they are capable of doing well in the activities during Cognitive Training.

_____ 5. they have the freedom to work on the activities in Cognitive Training in their own way.

_____ 6. the Cognitive Training activities are interesting.

_____ 7. they can be successful at meeting the cognitive challenges in Cognitive Training.

_____ 8. they enjoy completing the activities in Cognitive Training.

_____ 9. in general, Cognitive Training activities are useful to them.

_____ 10. during Cognitive Training, they can be successful in the activities.

_____ 11. the Cognitive Training instructor is friendly.

_____ 12. they have choices in what they are allowed to do in Cognitive Training.

_____ 13. they find Cognitive Training to be relevant for what they want to do in the future.

_____ 14. the Cognitive Training instructor is willing to assist them if they need help.

_____ 15. the Cognitive Training instructor is respectful of them.

_____ 16. they have control over the way they practice skills in Cognitive Training.

_____ 17. the Cognitive Training activities hold their attention.

_____ 18. they have options in how to achieve better cognitive skills in Cognitive Training.

Instructions for Scoring the MUSIC Inventory (Cognitive Training version for clinicians)

Score each MUSIC component by averaging the values from each item in the scale to produce a mean for the scale. For example, the "usefulness" score = (item 1 + item 9 + item 13) / 3

- eMpowerment = 5, 12, 16, 18(_____ + _____ + _____+ _____) / 4 = _____

- Usefulness = 1, 9, 13 (_____ + _____ + _____) / 3 = _____

- Success = 2, 4, 7, 10 (_____ + _____ + _____+ _____) / 4 = _____

- Interest = 6, 8, 17   (_____ + _____ + _____) / 3 = _____

- Caring = 3, 11, 14, 15 (_____ + _____ + _____+ _____) / 4 = _____

Look at your scores for each MUSIC component. Higher numbers indicate that your instruction is more consistent with the strategies related to those MUSIC components. Lower numbers indicate that you may be able to implement more strategies consistent with those MUSIC components. These results cannot be interpreted precisely. Instead, they're intended to help you diagnose areas of possible strengths and weaknesses. So obviously, also use your beliefs about your instructional strengths and weaknesses related to clients' MUSIC perceptions. To corroborate your beliefs, you can assess clients' perceptions by asking students to complete the client version of the MUSIC Inventory.

Other important notes:

- Do not sum or average all 18 items because this produces a meaningless value. It is inconsistent with the principles of the MUSIC model to assume that motivation is the sum of empowerment, usefulness, success, interest, and caring. Although this may be true in some cases, it is possible that a person is highly motivated and engaged when he or she is high on only one or two of the MUSIC components and low on the others.

Jones, B. D. (2012/2020, September). *User guide for assessing the components of the MUSIC® Model of Motivation.* Retrieved from http://www.theMUSICmodel.com

Open-Ended Questions for Students

Where did these open-ended questions for students come from?

This section includes questions from different studies in which the researchers surveyed students about their perceptions related to the components of the MUSIC Model of Motivation (Jones, 2009, 2018). There is no one "correct" way to ask students about their perceptions related to the MUSIC model; therefore, you can alter these questions in any way that makes sense for your purposes. I have found that the questions labeled #1 below (the ones asking about change) are the most useful for getting ideas that can be used to redesign instruction.

If the questions you use are the same as, or similar to, the questions from the study below and you present or publish the results, please cite the study. The questions without citations were created by me for this *User Guide.*

Empowerment
1. What could be changed in this course to make you feel you had more choices in the course? (Jones et al., 2012, although the original question used the word "control" instead of "choices)
2. What choices did you have during the course (or activity)?
3. Which aspects of this course give you control over this course? (Jones et al., 2012)

Usefulness
1. What could be changed in this course to make it more useful to you? (Jones et al., 2012)
2. What do you find useful about this course (or activity)?

Success
1. What could be changed in this course to help you feel you could be more successful in it? (Jones et al., 2012)
2. What makes you feel successful in this course?
3. What makes you feel as though you cannot be successful in this course?

Interest
1. What could be changed in this course to make it more interesting and enjoyable? (Jones et al., 2012)
2. What do you like about this course?
3. What do you find interesting about this course?
4. Which parts of this course are boring?

Caring
1. What could be changed in this course to make you feel that the instructor or other students care about whether you learn the course content and care about you as a person?
2. What could be changed in this course to make you feel that the instructor cares about whether you learn the course content and do well in the course? (Jones et al., 2012)
3. What does the instructor do to provide you with the impression that she cares about whether you learn the course content and do well in the course? (Jones et al., 2012)
4. What does the instructor do to provide you with the impression that she cares about you as a person? (Jones et al., 2012)

Interview Questions for Students

Where did these interview questions for <u>students</u> come from?

This section includes questions from different studies in which the researchers interviewed students about their perceptions related to the components of the MUSIC Model of Motivation (Jones, 2009). There is no one "correct" way to ask students about their perceptions related to the MUSIC model; therefore, you can alter these questions in any way that makes sense for the objectives of your interviews. The studies had different purposes which is why the questions from each study are slightly different. Use the questions that allow you to best meet your objectives.

If the questions you use are the same as, or similar to, the questions from a study below and you present or publish the results, please cite the study.

STUDY 1 – The following questions are from:
- Evans, M. A., Jones, B. D., & Akalin, S. (2017). Using video game design to motivate students. *Afterschool Matters, 26,* 18-26.

NOTE: The word "activity" can be substituted with the specific activity that a student is working on.

Empowerment
- How much control do you have over what you're working on? (How much do you feel like you are doing what you want to be doing during this activity?)
  a. What things do you have control over?

Usefulness
- How useful is this activity for your goals this year or in the future?
  a. In what ways is it useful?

Success
- How successful do you think that you will be at this activity?
  a. (If needed): Why?

Situational Interest
- How interested are you in working on this activity? (How much do you enjoy this activity?)
  a. What about it interests you?

Individual Interest
- How important is this activity to you?
  a. Why is it important?

Academic Caring (teacher)
- How much does your <u>teacher</u> want you to succeed at this activity? (How much does your <u>teacher</u> like to help you on this activity?)
  a. How do you know?

Personal Caring (teacher)
- How much does your teacher care about you?
  - a. How do you know?

Academic Caring (other students)
- How much do <u>other students</u> want you to succeed at this activity?
  - a. How do you know?

Personal Caring (other students)
- How much do other students care about you?
  - a. How do you know?

STUDY 2 – The following questions are from:
- Jones, B. D., Epler, C. M., Mokri, P., Bryant, L. H., & Paretti, M. C. (2013). The effects of a collaborative problem-based learning experience on students' motivation in engineering capstone courses. *Interdisciplinary Journal of Problem-based Learning, 7*(2). doi:10.7771/1541-5015.1344

eMpowerment
- As you worked on your project, what aspects of the project were you able to control?
- What types of decisions did your group make in regards to how your group functioned?
  - o What was the result of those decisions?
- What types of decisions did your advisor make for you?

Usefulness
- How will what you are learning in this group project be useful to your short-term goals? Long-term goals?
- Was working within a collaborative group a realistic simulation of a real-world work experience? Please describe.

Success
- What aspects of this project make you feel competent? Overwhelmed? Bored?
- Describe the feedback you have received from the instructor and your advisor on this project.
  - o How does that differ from the feedback you received from your group members?
  - o What feedback has contributed most to your success?
- Do you believe that working within a group made this project easier or more challenging? Please explain.

Interest
- How did your group determine the topic you selected?
- Describe your initial interest in the project.
- How did working in a group influence your interest in the project?
- Describe your interest in the project now.
  - o Has this changed? If yes, what caused the change?
- Are the ideas and/or topics in this project really important to you? Please explain what makes them important to you.
  - o That is, do you care about the ideas, issues, and/or topics involved in this project?

Caring
- Describe your group's dynamics.
    - Describe how you interacted with your group members.
    - What would you change about the dynamics of your group?
- Describe your group's relationship with your advisor.
    - What role did your project's advisor play?
    - How does your advisor show respect and concern for your group?
    - What would you change about the role of your advisor?

STUDY 3 – The following questions are from:
- Jones, B. D., Chittum, J. R., Akalin, S., Schram, A. B., Fink, J., Schnittka, C.,…Brandt, C. (2015). Elements of design-based science activities that affect students' motivation. *School Science and Mathematics, 115*(8), 404-415. doi:10.1111/ssm.12143

NOTE: The title "Studio STEM" can be substituted with another program or the specific activity that the students worked on.

eMpowerment
- What choices did you have in Studio STEM?

Usefulness (for short-term goals)
- What have you done in Studio STEM that's useful to your life right now?

Success
- What made you feel that you could be successful in Studio STEM?

Interest
- What was interesting about the presentations?

Caring
- How did the instructors show that they cared about your success in Studio STEM?

Interview Questions for Teachers

Where did these interview questions for <u>teachers</u> come from?

The questions in this section are intended to be asked to teachers. They were created by Jones (2009) for instructors to use to begin thinking about their teaching. However, they could be used just as well during an interview with a teacher.

QUESTIONS – The following questions are from:
- Jones, B. D. (2009). Motivating students to engage in learning: The MUSIC Model of Academic Motivation. *International Journal of Teaching and Learning in Higher Education, 21*(2), 272-285.

eMpowerment
1. Do you feel that students have control over some aspects of their learning?
    a. Do they have choices about what they can do?
2. Do you believe, as their teacher, that you empower them to learn the material and do not try to manipulate their behavior?

Usefulness
1. Do you believe that students understand why your lessons are useful to their interests, to their career goals, and/or in the "real-world"?

Success
1. Do you believe that your lessons clearly state your expectations for them?
2. Do you think the learning activities are challenging in that they are not too hard or easy?
3. Do you provide regular feedback about their level of competence?
    a. (Another way to say this: How do they know how well they're doing?)
4. Do they believe that they can succeed?
    a. Do you feel that the lessons create a belief that they can succeed if they put forth the effort?

Interest
1. Do you feel that students are interested in the lessons?

Caring
1. Do you feel that the students believe that you care about whether they achieve the objectives of the lesson?
2. Do you feel that the students believe that you care about their well-being?

Other Items and Scales

This section includes items and scales that are sometimes used in combination with the MUSIC Inventory, including overall instructor rating, overall course rating, course effort scale, and ease of course scale..

Overall Instructor Rating and Overall Course Rating

These are two separate items and should NOT be combined into a scale.

<u>Citation</u>

Jones, B. D. (2010). An examination of motivation model components in face-to-face and online instruction. *Electronic Journal of Research in Educational Psychology, 8*(3), 915–944.

<u>Overall Instructor Rating</u>

This one item measures students' overall rating of the instructor in a course. The item was modeled after similar items typically used by universities in end-of-course evaluations.

1. My overall rating of the <u>instructor</u> for this course.
    1 = terrible
    2 = very poor
    3 = poor
    4 = good
    5 = very good
    6 = excellent

<u>Overall Course Rating</u>

This one item measures students' overall rating of a course. The item was modeled after similar items typically used by universities in end-of-course evaluations.

1. My overall rating of the <u>course</u>.
    1 = terrible
    2 = very poor
    3 = poor
    4 = good
    5 = very good
    6 = excellent

Course Effort scale

This 4-item scale measures the amount of effort that students believe that they are putting forth in a course. The items are averaged to compute a students' score.

<u>Citation</u>

Jones, B. D. (2019). Testing the MUSIC Model of Motivation Theory: Relationships between students' perceptions, engagement, and overall ratings. *The Canadian Journal for the Scholarship of Teaching and Learning, 10*(3), 1-15.

Students respond to all 4 items using the following Likert-format scale:

1 = strongly disagree
2 = disagree
3 = somewhat disagree
4 = somewhat agree
5 = agree
6 = strongly agree

Present tense version

1. I do the best work I can do in this course.
2. I try my hardest to do very well in this course.
3. In this course, I put forth my maximum effort.
4. I do as much as I can do to learn the material in this course.

Past tense version

1. I did the best work I could have done in this course.
2. I tried my hardest to do very well in this course.
3. In this course, I put forth my maximum effort.
4. I did as much as I could do to learn the material in this course.

Reliability information

Jones, B. D. (2019). Testing the MUSIC Model of Motivation Theory: Relationships between students' perceptions, engagement, and overall ratings. *The Canadian Journal for the Scholarship of Teaching and Learning, 10*(3), 1-15.
- Five different courses: α = 0.93, 0.87, 0.94, 0.83, 0.79.

Jones, B. D., Byrnes, M. K., & Jones, M. W. (2019). Validation of the MUSIC Model of Academic Motivation Inventory: Evidence for use with veterinary medicine students. *Frontiers in Veterinary Science, 6*(11), 1–9. https ://doi.org/10.3389/fvets .2019.00011 .
- The reliability estimates were very good across three samples of veterinary medicine students (α = 0.87, 0.90, 0.90).

Jones, B. D., & Carter, D. (2019). Relationships between students' course perceptions, engagement, and learning. *Social Psychology of Education: An International Journal, 22*, 819-839. doi:10.1007/s11218-019-09500-x
- α = 0.89 (n = 355 undergraduate students)

Open-ended item

Two questions: How much effort do you put into this course? Why do you put this amount of effort into this course?

Ease of Course scale

This 3-item scale measures the extent to which students perceive a course to be easy.

<u>Citation</u>

Jones, B. D. (2012/2020, January). *User guide for assessing the components of the MUSIC*® *Model of Motivation*. Retrieved from http://www.theMUSICmodel.com

<u>Students respond to all 3 items using the following Likert-format scale:</u>

 1 = strongly disagree
 2 = disagree
 3 = somewhat disagree
 4 = somewhat agree
 5 = agree
 6 = strongly agree

<u>Present tense version</u>

1. This course is very easy for me.
2. I don't need to work my hardest to get a high grade in this course.
3. In this course, I can get the grade I want with very little effort.

<u>Past tense version</u>

1. This course was very easy for me.
2. I didn't need to work my hardest to get a high grade in this course.
3. In this course, I can get the grade I want with very little effort.

<u>Reliability information</u>

Jones, B. D., Krost, K., & Jones, M. W. (2020, April). *Relationships among students' course perceptions, engagement, and achievement in a large online course*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.
- α = 0.73 (n = 1,446 undergraduate students)

Jones, B. D. (2012/2020, September). *User guide for assessing the components of the MUSIC*® *Model of Motivation*. Retrieved from http://www.theMUSICmodel.com

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