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

by Brett D. Jones





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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*<sup>®</sup> *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<sup>®</sup> 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 empowered by having the ability to make decisions about some aspects of their learning,
- 2. understand why what they are learning is useful for their short- or long-term goals,
- 3. believe that they can succeed if they put forth the effort required,
- 4. are interested 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, <u>2018</u>, 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:

- Read this free book: Jones, B. D. (2018). Motivating students by design: Practical strategies for professors (2nd ed.). CreateSpace.
  - Free PDF book to download: https://tinyurl.com/MotivatingStudents2pdf
  - Print book version to buy for \$19: http://tinyurl.com/motivatingstudentsbydesign2e
- 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
- Visit the MUSIC model website: www.theMUSICmodel.com
- Watch these YouTube videos: https://www.youtube.com/watch?v=0UvEGaJ9AK8

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 these five aspects of the motivational climate 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, 2012/2022). 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, at least the first time that you use the full name of the inventory ("the MUSIC® Model of Academic Motivation Inventory").

If you are using your results for your own instructional purposes, there is no need to cite anything, simply use the inventories as needed. 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. (2018). Motivating students by design: Practical strategies for professors (2nd ed.). CreateSpace. https://vtechworks.lib.vt.edu/handle/10919/102728
    - Free PDF to download: https://tinyurl.com/MotivatingStudents2pdf
    - Print book version to buy for \$19: http://tinyurl.com/motivatingstudentsbydesign2e
  - 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
- Cite the MUSIC® Model of Academic Motivation Inventory with this reference:
  - Jones, B. D. (2022, August). User guide for assessing the components of the MUSIC<sup>®</sup> Model of Motivation. Retrieved from http://www.theMUSICmodel.com

# What does the MUSIC Inventory measure?

The MUSIC Inventory is a multidimensional measure of the motivational climate in a learning environment. It measures students' perceptions related to 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	Definitions	
constructs	The degree to which a student perceives that:	Related constructs
Empowerment	they have control of their learning environment in the course	Autonomy (Deci & Ryan, 1991)
Usefulness	the coursework is useful to their future	Utility value (Wigfield & Eccles, 2000)
Success	they can succeed at the coursework	Expectancy for success (Wigfield & Eccles, 2000)
Interest	the instructional methods and coursework are interesting <sup>a</sup>	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)

<sup>&</sup>lt;sup>a</sup> For the 19-item College Student version, the definition for interest is "The degree to which a student perceives that the instructional methods are interesting." That is, interest in the "coursework" is not assessed.

Please note that although the MUSIC <u>Inventory</u> 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 (e.g., science), 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 in order of recency.

- Jones, B. D., & Wilkins, J. L. M. (2022). Validating the MUSIC Model of Academic Motivation Inventory: Evidence for the short forms of the college student version. *Journal of Psychoeducational Assessment*. <a href="https://doi.org/10.1177/07342829221121695">https://doi.org/10.1177/07342829221121695</a>
- Li, M., Jones, B. D., Williams, T. O., & Guo, Y. (2022). Chinese students' perceptions of the motivational climate in college English courses: Relationships between course perceptions, engagement, and achievement. *Frontiers in Psychology, 13*, Article 853221. https://doi.org/10.3389/fpsyg.2022.853221

- Jones, B. D., Fenerci-Soysal, H., & Wilkins, J. L. M. (2022). Measuring the motivational climate in an online course: A case study using an online survey tool to promote data-driven decisions. *Project Leadership & Society, 3*, Article 100046. <a href="https://doi.org/10.1016/j.plas.2022.100046">https://doi.org/10.1016/j.plas.2022.100046</a>
- Jones, B. D., Miyazaki, Y., Li, M., & Biscotte, S. (2022). Motivational climate predicts student evaluations of teaching: Relationships between students' course perceptions, ease of course, and evaluations of teaching. *AERA Open, 8*(1), 1-17. <a href="https://doi.org/10.1177/23328584211073167">https://doi.org/10.1177/23328584211073167</a>
- Jones, B. D., Krost, K., & Jones, M. W. (2021). Relationships between students' course perceptions, effort, and achievement in an online course. *Computers and Education Open, 2*, Article 100051. <a href="https://doi.org/10.1016/j.caeo.2021.100051">https://doi.org/10.1016/j.caeo.2021.100051</a>
- Wilkins, J. L. M., Jones, B. D., & Rakes, L. (2021). Students' class perceptions and ratings of instruction: Variability across undergraduate mathematics courses. Frontiers in Psychology, 12(576282). <a href="https://doi.org/10.3389/fpsyg.2021.576282">https://doi.org/10.3389/fpsyg.2021.576282</a>
- Topuz, K., Jones, B. D., Sahbaz, S., & Moqbel, M. (2021). A methodology to combine theoretical knowledge with a data-driven probabilistic graphical model. *Journal of Business Analytics*. Advance online publication. <a href="https://doi.org/10.1080/2573234X.2021.1937351">https://doi.org/10.1080/2573234X.2021.1937351</a>
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- Gladman, T., Gallagher, S., & Ali, A. (2020). MUSIC® for medical students: Confirming the reliability and validity of a multi-factorial measure of academic motivation for medical education, *Teaching and Learning in Medicine*, 32(5), 494-507. https://doi.org/10.1080/10401334.2020.1758704
- 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. <a href="https://doi.org/10.5206/cjsotl-rcacea.2019.3.9471">https://doi.org/10.5206/cjsotl-rcacea.2019.3.9471</a>
- 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
- Jones, B. D., & Carter, D. (2019). Relationships between students' course perceptions, engagement, and learning. *Social Psychology of Education: An International Journal*, 22, 819-839. https://doi.org/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. https://doi.org/10.1016/j.lindif.2018.11.007
- 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. https://doi.org/10.1016/j.schres.2018.11.037
- 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. <a href="https://doi.org/10.1186/s40594-017-0065-4">https://doi.org/10.1186/s40594-017-0065-4</a>
- 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. <a href="https://doi.org/10.1037/edu0000176">https://doi.org/10.1037/edu0000176</a>
- 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. <a href="https://doi.org/10.1080/09500693.2017.1319093">https://doi.org/10.1080/09500693.2017.1319093</a>
- Parkes, K., Jones, B. D., & Wilkins, J. L. M. (2017). Assessing music students' motivation using the MUSIC Model of Academic Motivation Inventory. *UPDATE: Applications of Research in Music Education*, 35(3), 16-22. https://doi.org/10.1177/8755123315620835

- 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). <a href="https://digitalcommons.georgiasouthern.edu/ij-sotl/vol10/iss1/7">https://digitalcommons.georgiasouthern.edu/ij-sotl/vol10/iss1/7</a>
- 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. <a href="https://doi.org/10.1177/0894845315603821">https://doi.org/10.1177/0894845315603821</a>
- 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. <a href="https://doi.org/10.1111/ssm.12143">https://doi.org/10.1111/ssm.12143</a>
- 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. https://doi.org/10.3102/978-0-935302-42-4
- 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. <a href="https://www.ijee.ie/contents/c300614A.html">https://www.ijee.ie/contents/c300614A.html</a>
- 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. <a href="https://doi.org/10.7771/1541-5015.1344">https://doi.org/10.7771/1541-5015.1344</a>
- 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.
   <a href="https://scholarworks.iu.edu/journals/index.php/jotlt/article/view/2040">https://scholarworks.iu.edu/journals/index.php/jotlt/article/view/2040</a>
- 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.
   <a href="http://www.investigacion-psicopedagogica.com/revista/articulos/22/english/Art">http://www.investigacion-psicopedagogica.com/revista/articulos/22/english/Art</a> 22 499.pdf

# MUSIC® Inventory (College Student version)

# **Purpose**

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

# **Three Forms of the College Student Version**

There are three different forms of the College Student version of the MUSIC Inventory: the 26-item form, the 20-item form, and the 19-item form. All of the forms include scales that measure students' perceptions of eMpowerment, Usefulness, Success, Interest, and Caring.

- The 26-item form is the original inventory and it has been used the longest. This form has been validated for use with many different populations. However, it is not really needed any more because the psychometric properties of the shorter forms are as good, or almost as good (<u>Jones & Wilkins, 2022</u>), and they can be completed in less time because they have fewer items.
- In the **20-item form**, the items are exactly the same as the items in the 26-item form except that 6 of the items have been removed. The 20-item form measures the same constructs that the 26-item form measures.
- In the **19-item form**, the items are exactly the same as the items in the 26-item form except that 7 of the items have been removed. The 19-item form measures the same constructs that the 26-item and 20-item forms measure except for the interest scale. Although all three forms measure situational interest, the 19-item form only measures the degree to which a student perceives that the *instructional methods* are interesting. The 26-item and 20-item forms measure the degree to which a student perceives that a combination of the *instructional methods* and *coursework* are interesting. The difference in the constructs measured is very minor; however, statistical analyses have demonstrated that the items that measure students' interest in the coursework tend to also load with items that measure students' perceptions of the usefulness of the coursework. Therefore, the 19-item version measures a situational interest construct that is more distinct from the usefulness construct.

Which form of the College Student version should you use? I recommend using the 19-item form because it takes students less time to complete and the validity of the scores is as good (or almost as good) as the 26-item version (see <a href="Jones & Wilkins, 2022">Jones & Wilkins, 2022</a>). In addition, the interest and usefulness constructs will be more distinct than in the other forms, which may be important if you are conducting statistical analyses that involve using all five of the MUSIC scale scores in the same analysis (e.g., regression, structural equation modeling). The only time I would consider using one of the other forms was if I was only computing the means for each scale and I wanted a measure of students' interest in the instructional methods and coursework.

#### Instructions for Administering the College Student version of the MUSIC Inventory

- **Title the inventory as general as possible**, such as "Survey of Students' Course Perceptions," "Course Questionnaire," "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.
- Often, a purpose statement is provided to explain the purpose of the survey (e.g., The purpose of this survey is to assess students' perceptions of this course.). This is usually

followed a statement about the fact that their names will not be provided to the instructor (if the names are used to give students credit for completing the survey). Here is an example:

# Survey of Students' Course Perceptions

The purpose of this assignment is to gather information about this course so that it can be improved.

Please provide your name and email address to receive credit for completing this assignment. Your name and email will not be included in the results that are provided to the instructor.

• Then, 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.						
O 1 = Strongly Disagree						
O 2 = Disagree						
O 3 = Somewhat Disagree						
O 4 = Somewhat Agree						
O 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's alpha values are based on George and Mallery's [2003] criteria).

- Jones and Wilkins (2022) provided validity evidence for the scores produced from the 26-item version, the 20-item version, and the 19-item version using data collected from 2,951 undergraduate students in 32 courses. All of the Cronbach's alpha values were good or excellent, the confirmatory factor analyses produced fit indices within acceptable ranges, and the MUSIC Inventory scales correlated with student effort, instructor ratings, and course ratings as anticipated.
- <u>Jones, Miyazaki, Li, and Biscotte, S. (2022)</u> used the inventory with 2,949 undergraduate students from 30 different courses and found that the Cronbach's alpha values were good to excellent: .86 for empowerment, .94 for usefulness, .87 for success, .92 for interest, and .86 for caring.
- <u>Jones, Krost, and Jones (2021)</u> used the inventory with 1,446 students in an online Geography course and found the Cronbach's alpha values to be good to excellent: .85 empowerment, .90 for usefulness, .86 for success, .90 for interest, and .84 for caring.
- Wilkins, Jones, & Rakes (2021) used the inventory with 795 undergraduate students in 43 mathematics courses. The Cronbach's alpha values were good to excellent: .89 for empowerment, .92 for usefulness, .92 for success, .93 for interest, and .91 for caring.
- <u>Jones (2019)</u> 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). This study provided evidence for predictive validity by demonstrating that the MUSIC components were positively related to students' effort (behavioral engagement), course rating, and instructor rating.
- 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 (behavioral engagement) and cognitive engagement.
- <u>Tendhar, Singh, and Jones (2017)</u> 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's alpha values are based on George and Mallery's [2003] 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 short version of the inventory (20-items) with 578 veterinary medicine students. All of the Cronbach's 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.

# Items by Scale for the College Student Version

In the following table, the items with an asterisk (\*) can be removed for the 19-item and 20-item forms. For the Interest scale, see the notes in the table for which items to remove for the shorter forms.

Scales	Items by Scale for the College Student version					
	Past tense	Present tense				
Empowerment	<ul> <li>* I had the opportunity to decide for myself how to meet the course goals.</li> <li>I had the freedom to complete the coursework my own way.</li> <li>I had options in how to achieve the goals of the course.</li> <li>I had control over how I learned the course content.</li> <li>I had flexibility in what I was allowed to do in this course.</li> </ul>	<ul> <li>* I have the opportunity to decide for myself how to meet the course goals.</li> <li>I have the freedom to complete the coursework my own way.</li> <li>I have options in how to achieve the goals of the course.</li> <li>I have control over how I learn the course content.</li> <li>I have flexibility in what I am allowed to do in this course.</li> </ul>				
Usefulness	<ul> <li>In general, the coursework was useful to me.</li> <li>The coursework was beneficial to me.</li> <li>I found the coursework to be relevant to my future.</li> <li>* I will be able to use the knowledge I gained in this course.</li> </ul>	<ul> <li>In general, the coursework is useful to me.</li> <li>The coursework is beneficial to me.</li> <li>I find the coursework to be relevant to my future.</li> <li>* I will be able to use the knowledge I gain in this course.</li> </ul>				

	The knowledge I gained in this course is important for my future.	The knowledge I gain in this course is important for my future.
Success	<ul> <li>I was confident that I could succeed in the coursework.</li> <li>I felt that I could be successful in meeting the academic challenges in this course.</li> <li>I was capable of getting a high grade in this course.</li> <li>Throughout the course, I felt that I could be successful on the coursework.</li> </ul>	<ul> <li>I am confident that I can succeed in the coursework.</li> <li>I feel that I can be successful in meeting the academic challenges in this course.</li> <li>I am capable of getting a high grade in this course.</li> <li>Throughout the course, I have felt that I could be successful on the coursework.</li> </ul>
Interest	<ul> <li>(Remove this item for the 19-item and 20-item forms.) The coursework held my attention.</li> <li>The instructional methods used in this course held my attention.</li> <li>I enjoyed the instructional methods used in this course.</li> <li>(Remove this item for the 20-item form.) The instructional methods engaged me in the course.</li> <li>(Remove this item for the 19-item form.) I enjoyed completing the coursework.</li> <li>(Remove this item for the 19-item form.) The coursework was interesting to me.</li> </ul>	<ul> <li>(Remove this item for the 19-item and 20-item forms.) The coursework holds my attention.</li> <li>The instructional methods used in this course hold my attention.</li> <li>I enjoy the instructional methods used in this course.</li> <li>(Remove this item for the 20-item form.) The instructional methods engage me in the course.</li> <li>(Remove this item for the 19-item form.) I enjoy completing the coursework.</li> <li>(Remove this item for the 19-item form.) The coursework is interesting to me.</li> </ul>
Caring	<ul> <li>* The instructor was available to answer my questions about the coursework.</li> <li>The instructor was willing to assist me if I needed help in the course.</li> <li>The instructor cared about how well I did in this course.</li> <li>The instructor was respectful of me.</li> <li>The instructor was friendly.</li> <li>* I believe that the instructor cared about my feelings.</li> </ul>	<ul> <li>* The instructor is available to answer my questions about the coursework.</li> <li>The instructor is willing to assist me if I need help in the course.</li> <li>The instructor cares about how well I do in this course.</li> <li>The instructor is respectful of me.</li> <li>The instructor is friendly.</li> <li>* I believe that the instructor cares about my feelings.</li> </ul>

# MUSIC Inventory (College Student version, 19 items, present tense)

- This is the recommended version for most uses. To be administered anytime during a course or at the end of a course.
- Follow the directions provided on a prior page of this User Guide for how to title the survey and for the instructions that should be given at the beginning of the survey.

# **Instructions**

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

Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree
 1. The c	oursework is ber	neficial to me.			
 2. I am c	confident that I ca	an succeed in th	e coursework.		
 3. The in	nstructional meth	ods used in this	course hold my	attention.	
 4. The in	structor is friend	lly.			
 5. I have	the freedom to	complete the co	ursework my ow	n way.	
 6. I enjoy	y the instructiona	al methods used	in this course.		
 7. I feel t	that I can be suc	cessful in meeti	ng the academic	challenges ir	n this course.
 8. The in	structor is respe	ectful of me.			
 9. I have	options in how	to achieve the g	oals of the cours	se.	
10. In ge	eneral, the cours	ework is useful t	o me.		
11. I am	capable of gettir	ng a high grade	in this course.		
12. The	instructional met	hods engage m	e in the course.		
 13. The	instructor is willir	ng to assist me i	f I need help in t	he course.	
14. I hav	e control over he	ow I learn the co	ourse content.		
 15. Thro	ughout the cours	se, I have felt th	at I could be suc	cessful on the	e coursework.
16. I find	I the coursework	to be relevant t	o my future.		
17. The	instructor cares	about how well I	do in this cours	e.	
 18. The	knowledge I gair	n in this course i	s important for r	ny future.	

\_\_\_\_\_ 19. I have flexibility in what I am allowed to do in this course.

# <u>Instructions for Scoring the MUSIC Inventory (College Student version, 19-items)</u>

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

```
Empowerment score = (item 5 + item 9 + item 14 + item 19 / 4

Usefulness score = (item 1 + item 10 + item 16 + item 18) / 4

Success score = (item 2 + item 7 + item 11 + item 15) / 4

Interest score = (item 3 + item 6 + item 12) / 3

Caring score = (item 4 + item 8 + item 13 + item 17) / 4
```

## Other important notes:

• Do not sum or average all 19 items because this produces a meaningless value. It is inconsistent with the principles of the MUSIC model to assume that motivational climate is the sum of the empowerment, usefulness, success, interest, and caring scales. Although this may be true in some cases, it is possible that a student is highly motivated and engaged when they are high on only one or two of the MUSIC components and low on the others.

# MUSIC Inventory (College Student version, 26 items, present tense)

- To be administered near the <u>beginning or middle</u> of a course (however, it can be administered at the end of a course)
- Follow the directions provided on a prior page of this User Guide for how to title the survey and for the instructions that should be given at the beginning of the survey.

3

# **Instructions**

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

2

l		3	4	5	O		
Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree		
 1. The co	oursework holds	my attention.					
 2. I have	the opportunity	to decide for my	self how to mee	et the course go	als.		
 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 in	structional meth	ods used in this	course hold my	attention.			
 7. I am c	onfident that I ca	an succeed in th	e coursework.				
 8. I have	the freedom to	complete the co	ursework my ow	n way.			
 9. I enjoy	the instructiona	al methods used	in this course.				
 10. I feel that I can be successful in meeting the academic challenges in this course.							
 11. The i	instructional met	hods engage m	e in the course.				
 12. I hav	e options in how	to achieve the	goals of the cou	rse.			
 13. I enjo	by completing the	e coursework.					
 14. I am	capable of gettir	ng a high grade	in this course.				
 15. The	coursework is in	teresting to me.					
 16. The i	instructor is willir	ng to assist me i	f I need help in t	he course.			
 17. I hav	e control over he	ow I learn the co	ourse content.				
 18. Thro	ughout the cours	se, I have felt tha	at I could be suc	cessful on the c	oursework.		
 19. I find	the coursework	to be relevant to	o my future.				
 20. The i	instructor cares	about how well I	do in this cours	e.			
 21. I will	be able to use the	ne knowledge I (	gain in this cours	se.			
 22. The i	instructor is resp	ectful of me.					
 23. The l	knowledge I gair	n in this course i	s important for n	ny future.			
 24. The i	instructor is frien	ıdly.					
 25. I beli	eve that the inst	ructor cares abo	out my feelings.				
00 11			4 1 1 41 1				

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

6

# MUSIC Inventory (College Student version, 26 items, past tense)

- Can be administered near the end of a course (or the present tense version can be used)
- Follow the directions provided on a prior page of this User Guide for how to title the survey and for the instructions that should be given at the beginning of the survey.

# **Instructions**

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

1 2 3 4

	1	2	3	4	5	6
	Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree
	1. The co	oursework held r	ny attention.			
-	2. I had t	he opportunity to	o decide for mys	self how to meet	the course goa	ls.
	3. In gen	eral, the course	work was useful	to me.		
	4. The in	structor was ava	ailable to answe	r my questions a	about the course	work.
	5. The co	oursework was b	eneficial to me.			
	6. The in	structional meth	ods used in this	course held my	attention.	
	7. I was o	confident that I d	could succeed in	the coursework	ζ.	
	8. I had t	he freedom to c	omplete the cou	rsework my owr	n way.	
	9. I enjoy	ed the instruction	onal methods us	ed in this course	<del>)</del> .	
	10. I felt	that I could be s	uccessful in me	eting the acader	nic challenges i	n this course.
	11. The i	nstructional met	hods engaged r	ne in the course		
	12. I had	options in how	to achieve the g	oals of the cour	se.	
	13. I enjo	yed completing	the coursework			
-	14. I was	capable of gett	ing a high grade	in this course.		
-	15. The	coursework was	interesting to m	e.		
	16. The i	nstructor was w	illing to assist m	e if I needed he	p in the course.	
	17. I had	control over ho	w I learned the o	course content.		
	18. Thro	ughout the cours	se, I felt that I co	ould be successf	ul on the course	work.
	19. I four	nd the coursewo	rk to be relevan	t to my future.		
	20. The i	nstructor cared	about how well I	did in this cours	se.	
	21. I will	be able to use the	ne knowledge I (	gained in this co	urse.	
	22. The i	nstructor was re	spectful of me.			
	23. The l	knowledge I gair	ned in this cours	e is important fo	r my future.	
	24. The i	nstructor was fri	endly.			
	25. I beli	eve that the inst	ructor cared abo	out my feelings.		
	26. I had	flexibility in wha	at I was allowed	to do in this cou	rse.	

# MUSIC Inventory (College Student version, present tense, 26 items, major/program level)

- To be administered while the student is enrolled in college
- Use the instructions below. Title the survey following the directions in a prior page of this User Guide. Also, use the directions on a prior page for how to format the 1 to 6 scale.

## Instructions

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 using the following scale:

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

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.

Also, note that the word "coursework" refers to anything that you did in these courses, including

assignment, activities, readings, etc. \_\_\_\_\_ 1. The coursework holds my attention. 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, 26-items)

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 motivational climate is the
sum of the empowerment, usefulness, success, interest, and caring scales. Although this may
be true in some cases, it is possible that a student is highly motivated and engaged when they
are high on only one or two of the MUSIC components and low on the others.

# 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 in relation to this one course using this scale:

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

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

Studer	nts 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 end of a course, or the present tense version can be used)

# **Instructions**

List a course for which you want to assess students' motivation:	
Description of the three holes, in relation to this one payment using this pople.	

Respond to the items below in relation to this one course using this scale:

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

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

Studer	nts 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.

<u>NOTE</u>: 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 <a href="https://www.theMUSICmodel.com">www.theMUSICmodel.com</a>.

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

# **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 motivational climate by assessing 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.						
O 1 = Strongly Disagree						
O 2 = Disagree						
O 3 = Somewhat Disagree						
O 4 = Somewhat Agree						
O 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.

-----

# **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	2	3	4	5	6
Strongly	Disagree	Somewhat	Somewhat	Agree	Strongly agree
disagree		disagree	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.

\_\_\_\_\_

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

The inventories are provided on the following pages.

# **Questions About Science Class**

# **Directions**

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	2 Disagree	3 Somewhat	4 Somewhat	5 Agree	6 Strongly agree		
	disagree		disagree	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	y science teache	er cares about he	ow well I do in s	cience class.			
	4. la	m capable of ge	etting a high grad	de in science cla	SS.			
	5. I h	ave the freedom	to complete my	y science class v	work in my own	way.		
_	6. The science class work is interesting to me.							
_	7. I fe	7. I feel that I can be successful in meeting the academic challenges in science class						
_	8. le	8. I enjoy completing science class work.						
	9. In	9. In general, science class work is useful to me.						
	10. 🗅	10. During science class, I feel that I can be successful on the class work.						
_	11. N	_ 11. My science teacher is friendly.						
	12. I	have choices in	what I am allow	ed to do in scier	nce class.			
	13. I	_ 13. I find science class work to be relevant to my future.						
_	14. N	14. My science teacher is willing to assist me if I need help in science class.						
	15. N	15. My science teacher is respectful of me.						
	16. I	16. I have control over how I learn the content in science class.						
	17. T	he science clas	s work holds my	attention.				
_	18. I	have options in	how to achieve	the goals in scie	nce class.			

# MUSIC Inventory (Middle/High School Student version, past tense)

(can be administered near the end of a course, or the present tense version can be used)

# **Directions**

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	2 Disagree	3 Somewhat	4 Somewhat	5 Agree	6 Strongly agree			
	disagree		disagree	agree	7 .g. 00	onengly 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. M	y science teache	er cared about h	ow well I did in s	cience class.				
	4. I v	vas capable of g	etting a high gra	ide in science cl	ass.				
_	5. I h	ad the freedom	to complete my	science class w	ork in my own w	vay.			
_	6. Th	ne science class	work was intere	sting to me.					
_	7. I fe	7. I felt that I could be successful in meeting the academic challenges in science class							
_	8. le	8. I enjoyed completing science class work.							
_	9. In	general, science	e class work was	s useful to me.					
_	10. [	Ouring science cl	ass, I felt that I	could be succes	sful on the class	s work.			
	11. N	_ 11. My science teacher was friendly.							
	12. I	had choices in v	vhat I was allow	ed to do in scier	ice class.				
_	13. I	13. I found science class work to be relevant to my future.							
	14. N	_ 14. My science teacher was willing to assist me if I needed help in science class.							
	15. N	15. My science teacher was respectful of me.							
_	16. I	16. I had control over how I learned the content in science class.							
_	17. T	he science clas	s work held my	attention.					
	18. I	had options in h	ow to achieve th	ne goals in scier	ice class.				

# MUSIC Inventory (Middle/High School Student version, past tense)

(to be administered near the end of an activity or lesson)

# **Directions**

These items ask you about the science activity you just finished and the teacher of the

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

г		_	_	_	_	_		
	1 Strongly	2 Disagree	3 Somewhat	4 Somewhat	5 Agree	6 Strongly agree		
	disagree		disagree	agree	7 .9. 00			
_	1. The knowledge I gained in the activity is important for my future.							
_	2. I w	2. I was confident that I could succeed in the activity.						
_	3. My	teacher cared	about how well I	did in the activi	ty.			
_	4. l w	as capable of g	etting a high gra	de in the activity	<b>/</b> .			
_	5. I h	ad the freedom	to complete the	activity in my ov	vn way.			
_	6. Th	e activity was in	teresting to me.					
_	7. l fe	elt that I could be	e successful in n	neeting the chal	lenges in the ac	tivity.		
_	8. le	njoyed completi	ng the activity.					
_	9. In general, the activity was useful to me.							
_	10. D	10. During the activity, I felt that I could be successful.						
_	11. M	ly teacher was f	riendly.					
_	12. I	had choices in v	vhat I was allow	ed to do in the a	ctivity.			
_	13. I	found the activit	y 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 ove	how I learned t	he content in the	e activity.			
_	17. T	he activity held	my attention.					
_	18. I	had options in h	ow to achieve th	ne goals in the a	ctivity.			

# 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	I have the freedom to complete my science class work in my own way.
(4 items)	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	The knowledge I gain in science class is important for my future.
(3 items)	In general, science class work is useful to me.
	I find science class work to be relevant to my future.
Success	I am confident that I can succeed in science class work.
(4 items)	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	The science class work is interesting to me.
(3 items)	I enjoy completing science class work.
	The science class work holds my attention.
Caring	My science teacher cares about how well I do in science class.
(4 items)	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 motivational climate by assessing 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**

<u>Jones and Sigmon (2016)</u> 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</u> <u>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 pizz
-----------------------

\_\_\_\_\_

# 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>)

<b>Directions</b>				Date:
was). Please t	hink about only thi	s as you answe	er these questions	s class (the teacher will tell you what it s. There are no right or wrong answers elow and write it in the blank next to
1	2	3	4	
No	Maybe	Yes	Definitely, Yes!	
	I was able to do     I liked what I di	0 ,		
			in achaal	
	3. What I learned	•	III SCHOOL	
	4. I knew I could of			
	<ol><li>I could do it my</li></ol>	way.		
	<ol><li>My teacher was</li></ol>	s helpful.		
	7. It was useful to	me.		
	8. What I did was	interesting.		
	9. My teacher car	ed about how v	vell I did.	
	10. It was easy to	do.		
	11. I made decision	ons.		
	12. What I did wa	s fun.		
	13. I can use wha	t 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	I could do it my way.
(3 items)	I made decisions.
	I had choices.
Usefulness	What I learned could help me in school.
(3 items)	It was useful to me.
	I can use what I learned.
Success	I was able to do a good job.
(3 items)	I knew I could do well.
	It was easy to do.
Interest	I liked what I did.
(3 items)	What I did was interesting.
	What I did was fun.
Caring	My teacher was helpful.
(3 items)	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).

\_\_\_\_\_ 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....

			٠ (	لملك أجب بأمانة وصدق	ه او خاطئة ، من فض	ت صحید	لا توجد إجابان
				الية	فى تقييم العبارات الة	ت الآتية	ستخدم التقديرا
	6 او افق بشدة	5 أو افق	4 أوافق إلى حد ما	3 لا أوافق إلى حد ما	2 لا أوافق		1 لا أوافق بش
L			l	l	- 1 11	_	
				ر انتیاهی	العبارة : تجذب أعمال المقر	م 1.	
			المقرر	ر كيف سأحقق أهداف		.2	
				فة عامة مفيدة لي	-	.3	
			ول اعمال	ي يجيب عن أسئلتي ح	المحاضر متاح لك	.4	
				ية لي	المقرر أعمال المقرر نافع	.5	
			المقرر انتباهى	يس المستخدمة في هذا		.6	
			ً لمقرر	" طيع النجاح في أعمال ا	أنا واثق أنني أستد	.7	
			<i>ي</i>	أعمال المقرر بطريقة	لدي الحرية لإنجاز	.8	
			هذا المقرر	لتدريس المستخدمة في	أنا ستمتع بطرق ا	.9	
		هذا المقرر	تحديات الأكاديمية في ه	غ النجاح في مواجهة الذ	أشعر أنني أستطيع	.10	
				ريس المستخدمة منخرد		.11	
			ىقرر	كيفية تحقيق أهداف الم	-	.12	
			. h. i.		أستمتع بأداء أعمال	.13	
			ي هذا المفرر	سول على تقدير عال فـ تـــــــــــــــــــــــــــــــــــ		.14	
			بتحت مساعدة في المق	ه بالنسبه ئي تعداد لمساعدتي إذا اح	أعمال المقرر شيق	.15	
		))	تنجب مساعدة في المع	تعداد المساعدتي إدا الد لم محتوى المقرر		.16	
				عم معتوی اعظرر	العدم ني ميب ت	.17	
		ىقرر	ون ناجحا في اعمال الد	ِت بأنني يمكنني ان اكر	خلال المقرر شعر	.18	
				رر مرتبطة بمستقبلي	أجد أن أعمال المف	.19	
				ى جودة أدائي في المق	•	.20	
			ي اكتسبتها من المقرر	، استخدام المعارف التو		.21	
			tee te		يحترمني المحاضر	.22	
			مه لمستقبلي	سبها في هذا المقرر مه		.23	
				1 > 1	المحاضر ودود	.24	
				ِ يراعي مشاعري	اعتقد أن المحاضر	.25	

لدي مرونة في ما هو مسموح لي عمله في المقرر

.26 \_\_\_\_

## 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, <u>Jones, Li, and Cruz (2017)</u> 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.

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教师。

### 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. 老帅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,答案没有對錯之分。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	De vragen die betrekking hebben op een cursus
refer to this course and your primary instructor	of een docent hebben betrekking op deze cursus
, ,	en jouw docent
Please rate the items in this section using the	Beoordeel de stellingen aan de hand van de
following scale:	volgende indeling
1 = Strongly disagree	1 = helemaal oneens
2 = Disagree	2 = oneens
3 = Somewhat disagree	3 = een beetje oneens
4 = Somewhat agree	4 = een beetje mee eens
5 = Agree	5 = mee eens
6 = Strongly agree	6 = helemaal mee eens.
Note that the word "coursework" refers to	Het woord 'onderwijsactiviteit' heeft betrekking op
anything that you do in the course, including	alles wat je in de cursus gedaan hebt, dus alle
assignments, activities, readings, etc.	activiteiten, opdrachten, leeswerk, werkcolleges
	etc.
There are no right or wrong answers to these	Er zijn geen goede of foute antwoorden.
questions. Please answer them honestly. Some	Beantwoord de stelling zo eerlijk mogelijk,
of the questions might seem repetitive, but it is	Sommige stellingen lijken wellicht sterk op elkaar
important that you answer tham all to obtain the	maar het is belangrijk om alle stellingen te
best possible results.	beantwoorden om zodoende een optimaal
	resultaat te bereiken
The coursework holds my attention.	De gebruikte onderwijsactiviteiten houden
	afdoende mijn aandacht vast.
2. I have the opportunity to decide for myself	2. Ik kan zelf bepalen hoe ik de cursusdoelen kan
how to meet the course goals.	bereiken.
3. In general, the coursework is useful to me.	3. Over het algemeen genomen is de cursus
4. The instructor is evallable to ensure my	nuttig voor mij.
4. The instructor is available to answer my	4. De docent is bereid om mijn vragen over de
questions about the coursework.	leerstof te beantwoorden.
5. The coursework is beneficial to me.	5. De cursus was nuttig voor mij.
o. The dedicework is periodical to me.	o. De sarsas was riding voor rinj.
6. The instructional methods used in this course	6. De in de cursus gebruikte onderwijsmethoden
hold my attention.	weten mijn aandacht vast te houden.
,	,
7. I am confident that I can succeed in the	7. Ik vertrouw erop dat ik de cursus succesvol
coursework.	kan afronden.
8. I have the freedom to complete the	8. Ik heb de vrijheid om de cursus te volbrengen
coursework my own way.	hoe ik dat wilde.
9. I enjoy the instructional methods used in this	9. De gebruikte onderwijsvormen zijn prettig
course.	(leuk).
10. I feel that I can be successful in meeting the	10. lk heb het gevoel dat ik de academische
academic challenges in this course.	uitdagingen binnen de cursus aan kan.
11. The instructional methods engage me in the	11. De gebruikte onderwijsvormen betrekken mij
course.	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 backtranslated 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.

### 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
كاملا موافق	مو افق	تا حدودي موافق	تاحدو دى مخالف	مخالف	كاملا مخالف

1	2	3	4	5	6			
كاملا مخالف	مخالف	تاحدودي مخالف	تا حدودي موافق	موافق	كاملا موافق			
1- فعالیت های درسی توجه من را جلب میکند.								
2- فرصت این ا	را دارم که درمورد چ	گونگی رسیدن به اهدا	ف درس تصمیم بگیر،	۶.				
3_ به طور ک <i>لی</i>	، ترم برای من مفید اس	ىت.						
4- مربی برای <sub>ب</sub>	پاسخگویی به سوالات	من در مورد فعالیت .	های در سی حضور دار	رد (در دسترس است)				
5_ فعالیت های .	در سی بر ای من سو دم	ند است.						
6- روشها <i>ي</i> آمو	زِ شی مورد استفاده در	ِ این درس توجه مرا	جلب میکند.					
7_مطمئن هستم	که می توانم در فعایت	، های در سی موفق بالث	ىم.					
8- برای تکمیل	فعالیت های در سی به	روش شخصى خودم	آز ادی دار م.					
9-از روش ها <i>ی</i>	، آموزش <i>ی</i> مورد استفاد	ه در این دوره لذت ه	<i>ى</i> برم.					
 10-احساس میکنم که میتوانم به طور موفقیت آمیزی با چالش های علمی این درس مقابله کنم.								
11- روش های	آموزشى استفاده شده	در این کلاس، مرا به	این در س علاقه مند م	ی کند.				
 12- در مورد چگونگی رسیدن به اهداف این دوره، اختیاراتی دارم.								
 13- از تکمیل ف	عالیت های در سی لذت	، می برم.						
 14- قادر به گر،	فتن نمره بالا در این د	رس هست <u>م.</u>						
	ں در سی بر ای من جالد	·						
			قانه مر ا یاری می کند	_				
	ه ی یادگیری محتوای							
			های در سی موفق باشم					
	، ب در سی این کلاس بر			•,				
	وه ی عملکر د من در	,	<del>.</del>					
	وه ی عمصور ی سی در نفاده از دانشی که در ا		ا. خداهد بور					
			ام حوامم بود.					
	من قابل احترام است		, ls.el					
	در این درس به دست	می اورم برای اینده ام	اهمیت دار د.					
24- استاد مهرب								
25- معتقدم که ا	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.

### MUSIC Inventory (Middle/High School Student version) (نسخه دانش آموزان دبیرستانی) ۱۸۳۳ (سخه دانش آموزان دبیرستانی)

سوال نمونه 1 لم الموال الموله عند الموله الموله 1 الموله 1 الموله 1 الموله 1 الموله 1 الموله 1 الموله المو

1	2	3	4	5	6
Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree
كاملا مخالفم	مخالفم	تا حدودي مخالفم	تا حدودي موافقم	مو افقم	كاملا موافقم

\_\_\_\_\_\_ 1.من دوست دارم پیتزا بخورم. \_\_\_\_\_ 1.من دوست دارم پیتزا بخورم. برای این سوال، اگر علاقه زیادی به خوردن پیتزا دارید میتوانید عدد و التخاب کنید.اگر به طور کلی علاقه ای به خوردن پیتزا ندارید می توانید عدد 1 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.

### 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

1	2	3	4	5	6
Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree
كاملا مخالفم	مخالفم	تا حدودي مخالفم	تا حدودي موافقم	مو افقم	كاملا موافقم

The knowledge I gain in science class is important for my future.	1.دانشی که از کلاس علوم به دست می آورم برای آینده من اهمیت دارد.
2. I am confident that I can succeed in science class work.	2.مطمئن هستم که می توانم در کارهای کلاس علوم موفق شوم.
3. My science teacher cares about how well do in science class.	3.معلم کلاس علوم به نحوه عملکرد من در کلاس علوم اهمیت می دهد.
4. I am capable of getting a high grade in science class.	4. من قادر به گرفتن درجه بالا(نمره بالا) در کلاس علوم هستم.
5. I have the freedom to complete my science class work in my own way.	5.من برای تکمیل فعالیت های کلاسی به روش شخصی خودم آزادی عمل دارم.
6. The science class work is interesting to me.	6.فعالیت های کلاس علوم برای من جالب توجه بود.
7. I feel that I can be successful in meeting the academic challenges in science class.	7. من احساس می کنم که میتوانم به طور موفقیت آمیزی با چالش های علمی درکلاس علوم مقابله کنم.
8. I enjoy completing science class work.	8. من به طور کامل از فعالیت های کلاس علوم لذت می برم.
9. In general, science class work is useful to me.	9.به طور کلی، فعالیت های کلاس علوم برای من مفید است.
10. During science class, I feel that I can be successful on the class work.	می کنم می توانم در فعالیت های کلاس موفق باشم.
11. My science teacher is friendly.	11.معلم علوم من خیلی مهربان است.
12. I have choices in what I am allowed to do in science class.	12.من در مورد کارهایی که می توانم در کلاس علوم انجام دهم قدرت انتخاب دارم.
13. I find science class work to be relevant to my future.	13. من دریافته ام که فعالیت های کلاس علوم بر آینده من تاثیر گذار خواهد بود.

14. My science teacher is willing to assist me if I need help in science class.	14.در صورت نیاز به هر گونه کمک معلم علوم، مشتاقانه به من کمک می کند.
15. My science teacher is respectful of me.	15 معلم علوم برای من احترام قایل است
16. I have control over how I learn the content in science class.	16. من بر نحوه یادگیری محتوای درس علوم کنترل دارم.
17. The science class work holds my attention.	17.فعالیت های کلاس علوم توجه من را به خود جلب می کند.
18. I have options in how to achieve the goals in science class.	18.من برای رسیدن به اهداف کلاس علوم اختیاراتی دارم.

# MUSIC® Inventory (French translation of the College Student version)

### **Purpose**

The purpose of the French translation of the College Student version of the MUSIC Inventory is make the MUSIC Inventory accessible to individuals who speak French. The translator for this version was Dr. Jonathan Piard (ENS Paris-Scalay, France). The translation was back-translated to English by Rebecca Jones 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**

No studies have been conducted to assess the validity evidence for this French 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.

### MUSIC Inventory, French translation (College Student version, past tense)

Veuillez évaluer les éléments de cette section en utilisant l'échelle suivante:

1	2	3	4	5	6
Pas du tout	Pas	Plutôt pas	Plutôt	D'accord	Tout à fait
d'accord	d'accord	d'accord	d'accord		d'accord

Notez que le mot «cours» fait référence à tous les formats pédagogiques ayant eu lieu que cela soit les cours magistraux, les cours interactifs, les travaux dirigés, les devoirs etc.
1. Les cours ont retenu mon attention.
2. J'ai eu l'occasion de décider moi-même comment atteindre les objectifs du cours.
3. En général, les cours m'ont été utiles.
4. L'enseignant·e ou l'encadrant·e était disponible pour répondre à mes questions sur le cours.
5. Le cours m'a été bénéfique.
6. Les méthodes pédagogiques utilisées dans ce cours ont retenu mon attention.
7. J'étais convaincu·e que je pouvais réussir les cours.
8. J'avais la liberté de suivre les cours à ma manière.
9. J'ai apprécié les méthodes pédagogiques utilisées dans ce cours.
10. J'ai senti que je pouvais réussir à relever les défis académiques de ce cours.
11. Les méthodes pédagogiques m'ont engagé dans le cours.
12. J'avais plusieurs options pour atteindre les objectifs du cours.
13. J'ai aimé participé aux cours.
14. Je me sentais capable d'obtenir une note élevée dans ce cours.
15. Le cours m'intéressait.
16. L'enseignant∙e était prêt∙e à m'aider si j'avais besoin d'aide pendant le cours.
17. Je contrôlais ma façon d'apprendre le contenu du cours.
18. Tout au long du cours, j'ai senti que je pouvais atteindre les objectifs pour ce cours.
19. J'ai trouvé que les cours étaient pertinents pour mon avenir.
20. Les enseignant.es se souciaient de ma réussite dans ce cours.
21. Je pourrai utiliser les connaissances/compétences que j'ai acquises dans ce cours.
22. L'enseignat.e était respectueux de moi.
23. Les connaissances/compétences que j'ai acquises dans ce cours sont importantes pour mon avenir.
24. L'enseignant e était sympathique.

 25. Je crois que l'enseignant e se souciait de mes sentiments.
26. J'avais de la flexibilité dans ce que j'étais autorisé à faire dans ce cours.

# MUSIC® Inventory (French translation of the Middle/High School version for a Class Activity)

### **Purpose**

The purpose of the French translation of the Middle/High School version of the MUSIC Inventory for a Class Activity is to assess students' perceptions of a specific class activity. The translator for this version was Dr. Jonathan Piard (ENS Paris-Scalay, France). The translation was back-translated to English by Rebecca Jones and checked by Brett Jones.

### **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. This version asks students about their perceptions for a specific class activity; therefore, the instructions should tell students exactly which activity it refers to. For example, "The following questions ask you about the <u>plant activity</u> you completed today during class." Or, "The following questions ask you about the activity related to Section 2.4 (Photosynthesis) that you completed over the past week."

The word "activity" (activité) can be replaced with the name of a class (science class or math class) if the purpose is to assess students' perceptions of a class more generally. The English version of the Middle/High School version is already worded in this manner.

Note that we have not translated the practice instructions (those that include the practice pizza item). If you want to use this inventory for middle or high school, please contact Brett Jones (<a href="mailto:brettdjones@gmail.com">brettdjones@gmail.com</a>) to discuss how to best present the instructions.

### 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**

No studies have been conducted to assess the validity evidence for this French 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.

## MUSIC Inventory, French translation (Middle/High School version, past tense) For a Class Activity

Veuillez évaluer les éléments de cette section en utilisant l'échelle suivante :

1	2	3	4	5	6
Pas du tout d'accord	Pas d'accord	Plutôt pas d'accord	Plutôt d'accord	D'accord	Tout à fait d'accord

	Les connaissances/compétences que j'ai acquises durant cette activité sont importantes pour mon avenir.
2.	J'étais convaincu que je pourrais réussir cette activité.
3.	Les enseignant⋅es se souciaient de ma réussite lors de cette activité.
4.	Je me sentais capable d'obtenir une note élevée pour cette activité.
5.	J'avais la liberté de réaliser cette activité à ma manière.
6.	Cette activité m'a intéressée.
7.	J'ai senti que je pouvais réussir à relever les défis de cette activité.
8.	J'ai aimé suivre/participer à cette activité.
9.	De manière générale, cette activité m'a été utile.
10	). Pendant cette activité, j'ai senti que je pouvais réussir.
11	. Les enseignant·es étaient sympathiques.
12	2. J'avais le choix de ce que j'étais autorisé à faire dans cette activité.
13	3. J'ai trouvé cette activité pertinente pour mon avenir.
14	Les enseignant⋅es étaient prêt.es à m'aider si j'avais besoin d'aide durant cette activité.
15	i. Les enseignant⋅es me respectaient.
16	5. J'avais le contrôle sur la façon d'apprendre le contenu de cette activité.
17	7. Cette activité a retenu mon attention.
18	B. J'avais plusieurs options pour atteindre les objectifs de cette activité.

# 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.

English – College version, present tense	Translation to German
Instructions	Anleitung
The items that refer to a course or instructor	Alle Fragen bezüglich des Kurses oder Lehrers
refer to this course and your primary instructor	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	Bitte bewerten Sie die Fragen in diesem
following scale:	Abschnitt auf der folgenden Skala:
1 = Strongly disagree	1 = Lehne stark ab
2 = Disagree	2 = Lehne ab
3 = Somewhat disagree	3 = Lehne eher ab
4 = Somewhat agree	4 = Stimme eher zu
5 = Agree	5 = Stimme zu
6 = Strongly agree	6 = Stimme stark zu
Note that the word "coursework" refers to	Beachten Sie, dass das Wort "Kursaktivitäten"
anything that you do in the course, including	sich auf alle Dinge bezüglich Ihres Kurses
assignments, activities, readings, etc.	beziehen, inklusive Übungsaufgaben,
	Lernmaßnahmen, Leseaufgaben u.s.w.
There are no right or wrong answers to these	Bei diesen Fragen gibt es keine richtigen oder
questions. Please answer them honestly. Some	falschen Antworten. Bitte beantworten Sie die
of the questions might seem repetitive, but it is	Fragen ehrlich. Manche Fragen scheinen sich zu
important that you answer tham all to obtain the	wiederholen, aber es ist wichtig, dass Sie alle
best possible results.	Fragen vollständig beantworten um die besten
	Resultate zu erhalten.
The coursework holds my attention.	Die Kursaktivitäten erwecken (halten) meine
	Aufmerksamkeit
2. I have the opportunity to decide for myself	2. Ich habe die Möglichkeit, selbst zu
how to meet the course goals.	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	4. Mein Lehrer ist bei Fragen bezüglich des
questions about the coursework.	Kurses verfügbar.
5. The coursework is beneficial to me.	5. Der Kurs bringt mir Vorteile
6. The instructional methods used in this course	6. Die Lehrmethoden in diesem Kurs erwecken
hold my attention.	meine Aufmerksamkeit
7. I am confident that I can succeed in the	7. Ich bin zuversichtlich, dass ich erfolgreich in
coursework.	diesem Kurs sein kann.
8. I have the freedom to complete the	8. Ich habe die Freiheit, die Kursinhalte auf
coursework my own way.	meine Art und Weise zu absolvieren
9. I enjoy the instructional methods used in this	9. Mir gefallen die Lehrmethoden in diesem Kurs
course.	
10. I feel that I can be successful in meeting the	10. Ich glaube, dass ich die akademischen
academic challenges in this course.	Anforderungen in diesem Kurs erfolgreich
	bewältigen kann.
11. The instructional methods engage me in the	11. Die Lehrmethoden fördern mein
course.	Engagement/ Lernbereitschaft in diesem Kurs.
12. I have options in how to achieve the goals of	12. Ich habe verschiedene Optionen, wie ich die
the course.	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	14. Ich bin fähig, eine gute Note in diesem Kurs
course.	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	16. Mein Lehrer ist bereit mir zu assistieren, falls
help in the course.	ich Hilfe brauche.
17. I have control over how I learn the course	17. Ich kann selbst kontrollieren, wie ich die
content.	Kursinhalte lerne.
18. Throughout the course, I have felt that I	18. Während des gesamten Kurses hatte ich das
could be successful on the coursework.	Gefühl, dass ich erfolgreich sein kann.
19. I find the coursework to be relevant to my	19. Ich empfinde die Kursaktivitäten relevant für
future.	meine Zukunft.
20. The instructor cares about how well I do in	20. Mein Lehrer kümmert sich darum, wie
this course.	erfolgreich ich in diesem Kurs abschneide.
21. I will be able to use the knowledge I gain in	21. Ich werde in der Lage sein, das erlernte
this course.	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	23. Das erlernte Wissen aus diesem Kurs ist für
important for my future.	meine Zukunft wichtig.
24. The instructor is friendly.	24. Mein Lehrer ist freundlich
25. I believe that the instructor cares about my	25. Ich glaube, dass mein Lehrer sich darum
feelings.	kümmert, wie ich mich fühle.
26. I have flexibility in what I am allowed to do in	26. Bezüglich des Kurses habe ich Freiheiten,
this course.	was ich machen kann.

## 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), <a href="Schram and Jones (2016">Schram and Jones (2016)</a> 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-lcelandic 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 skulið 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 truflið 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	2	3	4	5	6
Mjög	Ósammála	Nokkuð	Nokkuð	Sammála	Mjög
ósammála		ósammála	sammála		sammála

1.	Ég hef svolítið val um hvað ég geri ítímum.
2.	Það sem ég læri ítímum 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 ítímum heldur athygli minni.
17.	kennarinn minn er vingjarnlegur.
18.	Mér finnst vinnan og námið ítímum 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	2	3	4	5	6	
Mjög	Ósammála	Nokkuð	Nokkuð	Sammála	Mjög	
ósammála		ósammála	sammála		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 (Japanese translation of the College Student version)

### **Purpose**

The purpose of the Japanese translation of the College Student version of the MUSIC Inventory is make the MUSIC Inventory accessible to individuals who speak Japanese. The initial translator for this version was Dr. Koichiro Asa at Bunkyo Gakuin University, Japan. The translation was backtranslated to English by Takako Moroi at Bunkyo Gakuin University, Japan and checked by Brett Jones.

The following pages include three versions of this translation: College Student version past tense, College Student version present tense, and College Student version present tense for the major/program level.

### **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.

MUSIC Inventory	Japanese Translation
(College Student version, past tense)	oupanoes Translation
(can be administered near the end of a course, or	
the present tense version can be used) Instructions	指示
The items that refer to a course or instructor	預小   授業もしくは講師という用語は、この授業およ
refer to this course and your primary instructor	びメインの講師を指します。
Please rate the items in this section using the	下記の尺度を用い、それぞれの項目の評価をし
following scale:	てください。
1 = Strongly disagree	1 = 全くそう思わない
2 = Disagree	2= そう思わない
3 = Somewhat disagree	3 = ややそう思わない
4 = Somewhat agree	4 = ややそう思う
5 = Agree	5 = そう思う
6 = Strongly agree	6=とてもそう思う。
Note that the word "coursework" refers to	注: "課題"は授業内で行ったすべてのもの(宿
anything that you did in the course, including assignments, activities, readings, etc.	題、クラス活動、リーディングなどを含む)を
	指します。
There are no right or wrong answers to these	正解や不正解はありません。正直にお答え下さ
questions. Please answer them honestly. Some of the questions might seem repetitive, but it is	い。いくつかの質問は繰り返しに見えるかもし
important that you answer tham all to obtain the	れませんが、すべてのことは、最良の結果を得
best possible results.	るために重要なことです。
The coursework held my attention.	1. 課題は私にとって興味深いものであっ
	<i>t</i> =°
2. I had the opportunity to decide for myself how	2. 授業のゴールをどのように達成するか自
to meet the course goals.	分で決める機会があった。
3. In general, the coursework was useful to me.	3. 課題は概ね自分にとって役立つものであっ
<b>9</b> · · · · · · · · · · · · · · · · · · ·	t.
4. The instructor was available to answer my	4. 講師は課題についての質問に対応した。
questions about the coursework.	
5. The coursework was beneficial to me.	5. 課題は自分にとって利益があった。
6. The instructional methods used in this course	6. この授業で使われた指導方法は私の注意
held my attention.	を引いた。
7. I was confident that I could succeed in the	7. 課題が上手くできると確信を持てた。
coursework.  8. I had the freedom to complete the coursework	   8. 課題をやる方法を自由に選べた。
my own way.	8. 味趣をやる方法を自由に選べた。
I enjoyed the instructional methods used in this course.	9. 授業で使われた指導方法を楽しめた。
10. I felt that I could be successful in meeting the	10. 学問的な課題に挑戦し、上手く対応でき
academic challenges in this course.	ると感じた。
11. The instructional methods engaged me in	11.この授業で使われた指導方法に心が引き
the course.	11. この技术で使われた指導力法に心が行る
12. I had options in how to achieve the goals of	12. 授業の目標をどう達成するかについて、
the course.	
	その方法を選ぶことができた。

13. I enjoyed completing the coursework.	13. 課題を完成させることを楽しむことがで
	<b>  きた。</b>
14. I was capable of getting a high grade in this course.	14. 授業でよい成績を得ることができた。
15. The coursework was interesting to me.	15. 課題は興味深いものだった。
<ol><li>The instructor was willing to assist me if I needed help in the course.</li></ol>	16. 授業で助けが必要な場合、教員は喜んで 援助をした。
17. I had control over how I learned the course content.	17. 授業内容をどのように学習するか自分で管理できた。
18. Throughout the course, I felt that I could be successful on the coursework.	18. 授業中、課題を上手くできるだろうと確信できた。
<ol><li>I found the coursework to be relevant to my future.</li></ol>	19. 課題は私の将来に関連していることが分かった。
20. The instructor cared about how well I did in this course.	20. 講師は私が授業中どの程度よくできているかを気にかけてくれた。
21. I will be able to use the knowledge I gained in this course.	21. 授業で得た知識をいつか使うことができると思う。
22. The instructor was respectful of me.	22. 講師は私に敬意を払ってくれた。
23. The knowledge I gained in this course is important for my future.	23. 授業で得た知識は私の将来にとって重要 だった。
24. The instructor was friendly.	24. 講師は友好的だった。
25. I believe that the instructor cared about my feelings.	25. 講師は私の感情を気にかけてくれたと思う。
26. I had flexibility in what I was allowed to do in this course.	26.授業では、自分で選んで決めることがで きるものがあった。

MUSIC Inventory (College Student version, present tense)	Japanese Translation
(to be administered near the beginning or middle of a course, although it can be used at the end)	
Instructions	指示
The items that refer to a course or instructor	<sup>預小</sup>   授業もしくは講師という用語は、この授業およ
refer to this course and your primary instructor	びメインの講師を指します。
Please rate the items in this section using the	下記の尺度を用い、それぞれの項目の評価をし
following scale:	てください。
1 - Strongly disograp	1 = 全くそう思わない
1 = Strongly disagree 2 = Disagree	2 = そう思わない
3 = Somewhat disagree	3 = ややそう思わない
4 = Somewhat agree	4 = ややそう思う
5 = Agree	5 = そう思う
6 = Strongly agree	6=とてもそう思う。
Note that the word "coursework" refers to	注:"課題"は授業内で行ったすべてのもの(宿
anything that you do in the course, including assignments, activities, readings, etc.	題、クラス活動、リーディングなどを含む)を   指します。
There are no right or wrong answers to these	疳しより。   正解や不正解はありません。正直にお答え下さ
questions. Please answer them honestly. Some	い。いくつかの質問は繰り返しに見えるかもし
of the questions might seem repetitive, but it is	れませんが、すべてのことは、最良の結果を得
important that you answer tham all to obtain the	れなどのが、すべてのことは、厳良の相来を持
best possible results.	るために主女なことです。
The coursework holds my attention.	1. 課題は私にとって興味深いものである。
2. I have the opportunity to decide for myself	2. 授業のゴールをどのように達成するか自
how to meet the course goals.	分で決める機会がある。
3. In general, the coursework is useful to me.	3. 課題は概ね自分にとって役立つものである。
4. The instructor is available to answer my questions about the coursework.	4. 講師は課題についての質問に対応する。
5. The coursework is beneficial to me.	5. 課題は自分にとって利益がある。
6. The instructional methods used in this course	6. この授業で使われている指導方法は私の
hold my attention.	注意を引く。
7. I am confident that I can succeed in the coursework.	7. 課題が上手くできると確信している。
8. I have the freedom to complete the coursework my own way.	8. 課題をやる方法を自由に選べる。
9. I enjoy the instructional methods used in this course.	9. 授業で使われた指導方法を楽しめる。
10. I feel that I can be successful in meeting the	10. 学問的な課題に挑戦し、上手く対応でき
academic challenges in this course.	ると感じる。
11. The instructional methods engage me in the	11.この授業で使われている指導方法に、心
course.	が引き込まれる。
12. I have options in how to achieve the goals of	12. 授業の目標をどう達成するかについて、
the course.	その方法を選ぶことができる。

13. I enjoy completing the coursework.	13. 課題を完成させることを楽しむことがで
	きる。
14. I am capable of getting a high grade in this	14. 授業でよい成績を得ることができる。
Course.	15 無時法卿計深以去のよ
15. The coursework is interesting to me.	15.課題は興味深いものだ。
16. The instructor is willing to assist me if I need help in the course.	16. 授業で助けが必要な場合、教員は喜んで
•	援助をしてくれる。
17. I have control over how I learn the course	17. 授業内容をどのように学習するか自分で
content.	管理できる。
18. Throughout the course, I have felt that I	18. 授業中、課題を上手くできるだろうと確
could be successful on the coursework.	信できる。
10. I find the coursework to be relevant to my	
19. I find the coursework to be relevant to my future.	19. 課題は私の将来に関連していることが分
ruture.	かる。
20. The instructor cares about how well I do in	20. 講師は私が授業中どの程度よくできてい
this course.	るかを気にかけてくれる。
21. I will be able to use the knowledge I gain in	21.授業で得た知識をいつか使うことができ
this course.	ると思う。
22. The instructor is respectful of me.	22. 講師は私に敬意を払ってくれる。
23. The knowledge I gain in this course is	23. 授業で得た知識は私の将来にとって重要
important for my future.	だ。
24. The instructor is friendly.	24. 講師は友好的だ。
25. I believe that the instructor cares about my	25. 講師は私の感情を気にかけてくれると思
feelings.	う。
26. I have flexibility in what I am allowed to do in	26.授業では、自分で選んで決めることがで
this course.	きるものがある。
	$\mathbf{c} \circ \mathbf{v} \circ $

MUSIC Inventory	Innanaca Translation
MUSIC Inventory (College Student version, present tense, major/program level)	Japanese Translation
(to be administered while the student is enrolled in college)	
Instructions	指示
[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 using the following scale:	[具体的な専攻名を挿入]専攻において、授業を取った、もしくは最近履修している[専攻名もしくはプログラム名を挿入]の授業について考えながら、以下の項目について賛成もしくは反対の度合いの評価をしてください。
1 = Strongly disagree	1=全くそう思わない
2 = Disagree	2 = そう思わない
3 = Somewhat disagree	3 = ややそう思わない
4 = Somewhat agree	4 = ややそう思う
5 = Agree 6 = Strongly agree	5 = そう思う
0 = Strongly agree	6=とてもそう思う。
There are no right or wrong answers for	正解や不正解はありません。正直にお答え下さ
these questions. Please answer them	い。いくつかの質問は繰り返しに見えるかもし
honestly. Some of the questions might seem	れませんが、すべてのことは、最良の結果を得
repetitive, but it is important that you answer	るために重要なことです。
them all to obtain the best possible results.	
Also, note that the word "coursework" refers	注:"課題"は授業内で行ったすべてのもの(宿
to anything that you did in these courses,	題、クラス活動、リーディングなどを含む)を
including assignment, activities, readings,	指します。
etc.	
The coursework holds my attention.	1. 課題は私の関心を引く。
2. I have the opportunity to decide for myself	2. 授業のゴールをどのように達成するか自
how to meet the course goals.	分で決める機会がある。
3. In general, the coursework is useful to me.	3. 課題は概ね自分にとって役立つものである。
4. The instructor is available to answer my	4. 講師は課題についての質問に対応する。
questions about the coursework.	
5. The coursework is beneficial to me.	5. 課題は自分にとって利益がある。
6. The instructional methods used in this course	6. 授業で使われている指導方法は私の注意
hold my attention.	を引く。
7. I am confident that I can succeed in the coursework.	7. 課題が上手くできると確信している。
8. I have the freedom to complete the	8. 課題をやる方法を自由に選べる。
coursework my own way.	0 極帯ではたねと比談子はとかしはで
9. I enjoy the instructional methods used in this course.	9. 授業で使われた指導方法を楽しめる。
10. I feel that I can be successful in meeting the	10. 学問的な課題に挑戦し、上手く対応できると
academic challenges in this course.	感じる。

11. The instructional methods engage me in the course.	11.授業で使われている指導方法に、心が引き込まれる。
12. I have options in how to achieve the goals of the course.	12.授業の目標をどう達成するかについて、その方法を選ぶことができる。
13. I enjoy completing the coursework.	13.課題を完成させることを楽しむことができる。
14. I am capable of getting a high grade in this course.	14.授業でよい成績を得ることができる。
15. The coursework is interesting to me.	15.課題は興味深いものだ。
16. The instructor is willing to assist me if I need help in the course.	16.授業で助けが必要な場合、教員は喜んで援助をしてくれる。
17. I have control over how I learn the course content.	17.授業内容をどのように学習するか自分で管理できる。
18. Throughout the course, I have felt that I could be successful on the coursework.	18.授業中、課題を上手くできるだろうと確信できる。
19. I find the coursework to be relevant to my future.	19.課題は私の将来に関連していることが分かる。
20. The instructor cares about how well I do in this course.	20.講師は私が授業中どの程度よくできているかを気にかけてくれる。
21. I will be able to use the knowledge I gain in this course.	21.授業で得た知識をいつか使うことができると思う。
22. The instructor is respectful of me.	22.講師は私に敬意を払ってくれる。
23. The knowledge I gain in this course is important for my future.	23.授業で得た知識は私の将来にとって重要だ。
24. The instructor is friendly.	24.講師は友好的だ。
25. I believe that the instructor cares about my feelings.	25.講師は私の感情を気にかけてくれると思 う。
26. I have flexibility in what I am allowed to do in this course.	26.授業では、自分で選んで決めることがで きるものがある。

# 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 <u>수업</u> 또는 <u>교수</u>는 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	동의하지	조금 동의하지	조금 동의한다	동의한다	매우 동의한다.
않는다.	않는다	않는다			

 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 <u>수업</u> 또는 <u>교수</u>는 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	동의하지	조금 동의하지	조금 동의한다	동의한다	매우 동의한다.
않는다.	않는다	않는다			

 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)

#### 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.

## MUSIC Inventory – Polish translation (wersja dla studentów, czas przeszły)

(do przeprowadzenia pod koniec kursu)

#### 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 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. 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.

- 20 Prowadzący dbał o to, jak dobrze wypadłem w tym kursie
- 21 Będę mógł wykorzystać wiedzę zdobytą na tym kursie
- 22 Prowadzący szanował mnie
- 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 (Romanian translation of the College Student version, past tense)

#### **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 primary translator for this version was Dr. Liviu Rosca and it was back translated by Dr. Daniela Maria Cretu. Both of these translators are professors at Lucian Blaga University of Sibiu in Romania.

#### **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**

There is currently no validity evidence for this specific Romanian translation. However, given that it is translated directly from the English version, it is likely that this translated version will also produce scores that are valid for use with college students.

The inventory is provided on the following two pages.

## MUSIC Inventory, College Student version, past tense (to be administered near the end of a course)

MUSIC Inventory – English version	Romanian Translation
Instructions	Instrucţiuni
The items that refer to a course or	Itemii care se referă la curs sau instructor se referă la
instructor refer to this course and your primary instructor	acest curs şi la instructorul principal (titularul de curs).
Please rate the items in this section using	Vă rugăm să utilizați scala de mai jos pentru
the following scale:	marcarea răspunsurilor Dvs.:
1 = Strongly disagree	1 = Total dezacord
2 = Disagree	2 = Dezacord
3 = Somewhat disagree	3 = Dezacord parţial
4 = Somewhat agree	4 = Acord parţial
5 = Agree	5 = Acord
6 = Strongly agree	6 = Total acord
Note that the word "coursework" refers to	Observaţi faptul că prin "activitate la curs" înţelegem
anything that you do in the course, including	tot ce ați facut la curs, inclusiv sarcinile de lucru,
assignments, activities, readings, etc.	activitățile, documentarea etc.
There are no right or wrong answers to	Nu există răspunsuri bune sau greșite ale acestor
these questions. Please answer them	întrebări. Vă rugăm să răspundeți sincer. Unele dintre
honestly. Some of the questions might seem	întrebări vă vor părea repetitive, dar este important să
repetitive, but it is important that you answer	răspundeți la toate pentru a obține cele mai bune
tham all to obtain the best possible results.	rezultate.

- 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.

- 1. Activitatea de la curs mi-a captat atenţia.
- 2. Am avut ocazia de a decide cum să ating obiectivele cursului.
- 3. În general, activitatea la curs mi-a fost utila.
- 4. Profesorul a avut disponibilitatea de a-mi răspunde la întrebările de la activitățile cursului.
- 5. Activitatea de la curs mi-a fost de folos.
- 6. Metodele de instruire utilizate în cadrul cursului mi-au captat atenția
- 7. Am fost încrezător că voi avea succes la activitatile cursului.
- 8. Am avut libertatea de a finaliza activitatea de la curs aşa cum mi-am dorit.
- 9. Mi-au plăcut metodele de instruire utilizate la curs.
- 10. Am simțit că as putea să fac față cu succes provocărilor academice din acest curs.
- 11. Metodele de instruire m-au implicat în desfăşurarea cursului.
- 12. Am avut opţiuni asupra modului prin care să ating obiectivele cursului.
- 13. Mi-a făcut plăcere să realizez activitatea de la curs.
- 14. Am fost în stare să obţin o notă mare la acest
- 15. Activitatea din cadrul cursului a fost interesantă pentru mine.
- 16. Profesorul a dorit să mă ajute ori de câte ori a fost nevoie.
- 17. Am avut controlul asupra modului cum am învăţat conţinutul cursului.
- 18. Pe parcursul cursului am simţit că voi avea succes la activităţile cursului.
- 19. Am găsit activitățile cursului ca fiind relevante pentru viitorul meu.
- 20. Profesorului i-a păsat cât de bine am performat la curs.
- 21. Voi fi capabil să utilizez cunoștințele obținute în cadrul cursului.
- 22. Profesorul s-a purtat cu mine cu respect.
- 23. Cunoştinţele dobândite la curs sunt importante pentru viitorul meu.
- 24. Profesorul a fost prietenos.
- 25. Cred că profesorului i-a păsat de sentimentele mele.
- 26. Am avut flexibilitate în ceea ce mi s-a permis să fac la curs.

# 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 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, <u>Jones, Li, and Cruz (2017)</u> 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	En	Parcialmente	Parcialmente	De acuerdo	Muy de
desacuerdo	desacuerdo	en	de acuerdo		acuerdo
		desacuerdo			

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.
 <ol><li>Las actividades del curso son beneficiosas para mí.</li></ol>
 <ol><li>Me llaman la atención los métodos de enseñanza usados en este curso.</li></ol>
 8. Tengo la libertad de realizar las actividades del curso a mi manera.
 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.
 <ol> <li>Me consider capaz de obtener una alta calificación en este curso.</li> </ol>
 16. El(la) profesor(a) está dispuesto a ayudarme cuando lo(la) necesite.
 17. Tengo control sobre cómo aprendo los contenidos del curso.
 20. El(la) profesor(a) se preocupa por mi desempeño en el curso.
 ·
 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	En	Parcialmente	Parcialmente	De acuerdo	Muy de
desacuerdo	desacuerdo	en	de acuerdo		acuerdo
		desacuerdo			

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.
 <ol><li>Tengo la libertad de realizar las actividades del curso a mi manera.</li></ol>
 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 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, 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 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.

#### <u>Yönerge</u>

Aşağıdaki maddelerde geçen ders ve eğitmen kelimeleri bu ders ve dersin eğitmeni hakkındadir. 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.

4

5

6

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

3

2

1		3	+	3	U		
Kesinlikle katılmıyorum	Katılmıyorum	Kısmen katılmıyorum	Kısmen katılıyorum	Katılıyorum	Kesinlikle katılıyorum		
	D ( )						
1. Dersteki çalışmalar ilgimi canlı tutar.							
2. Dersin hedeflerine nasıl ulaşacağım konusunda karar verme özgürlüğüm var.							
	4. Dersin eğitmeni ders hakkindaki sorularımı cevaplamak üzere hazır ve ulaşıl						
	Dersteki çalışmal	, ,	•				
	Derste kullanılan		•	utuyor.			
7.	Derste başarılı ol	acağıma inanıyo	orum.				
8.	Dersteki çalışmal	arımı istediğim y	yolla tamamlama	a özgürlüğüm va	rdır.		
9.	Derste kullanılan	öğretme yönten	nleri hoşuma gid	iyor.			
10	. Dersteki akader	nik zorlukları ka	rşılamada başar	ılı olabileceğimi	düşünüyorum.		
11	. Derste kullanılaı	n öğretme yönte	mleri derse katil	mami sağlıyor.			
12	. Dersin hedefler	ine nasıl ulaşac	ağım konusunda	a seçeneklerim v	ardır.		
13	. Dersin çalışmala	arıni bitirmekten	zevk alırım.				
14	. Dersten yüksek	not almak icin y	eterince iyim.				
15	. Dersin çalışmala	ari benim için ilg	inçtir.				
16	. Derste yardıma	a ihtiyaç duyduğum zaman egitmen bana yardımcı olmaya					
	isteklidir.						
17	. Derste işlenen k	onuyu nasıl öğr	eneceğime kara	r verebilirim.			
18	. Ders boyunca s	ınıf çalışmaların	da başarılı olaca	ığımı hissederim	١.		
19	. Dersteki çalışma	aları geleceğimle	e alakalı buluyor	um.			
20	. Dersin egitmeni	derste ne kadaı	r iyi olduğuma ör	nem verir.			
21	. Derste öğrendig	öğrendigim bilgileri kullanabileceğim.					
22	. Dersin egitmeni	bana saygılıdır.					
23	. Derste kazandığ	jım bilgiler geled	ceğim için öneml	idir.			
24	24. Dersin egitmeni cana yakındır.						

 25. Dersin eğitmeninin his ve duygularımı önemsediğine inanıyorum.
26. Derste vapmam gerekenler arasından secme sansım yardır.

# 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.

#### <u>Yönerge</u>

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

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

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 B	4. Fen Bilimleri dersinden yüksek not almaya yeterliyim.							
 5. Fen B	silimleri dersinde	ki çalışmalarımı	istediğim yolla t	amamlama özg	ürlüğüm			
vard	ır.							
 6. Fen B	ilimleri dersinde	ki çalışmalar be	nim için ilginçtir.					
 7. Fen B	ilimleri dersinde	akademik zorlu	kları karşılamad	a başarılı olabil	eceğimi			
düşü	inüyorum.							
 8. Fen B	silimleri dersinde	sınıf çalışmalar	ına katılmaktan	zevk alırım.				
 9. Genel	llikle, Fen Bilimle	eri dersindeki ça	lışmalar benim i	çin yararlıdır.				
 10. Fen	Bilimleri dersi bo	oyunca, sınıf çal	ışmalarında baş	arılı olacağımı h	nissederim.			
 11. Fen	Bilimleri öğretme	enim cana yakın	ıdır.					
 12. Fen	Bilimleri dersind	e yapmam gere	kenler arasındaı	n seçme şansım	ı vardır.			
 13. Fen	Bilimleri dersind	eki çalışmaları ç	geleceğimle alak	alı buluyorum.				
 14. Fen	Bilimleri dersind	e yardıma ihtiya	ç duyduğum zaı	man öğretmenin	n bana			
yard	ımcı olmaya iste	eklidir.						
 15. Fen	Bilimleri öğretme	enim bana sayg	ılıdır.					
 16. Fen	Bilimleri dersind	e işlenen konuy	u nasıl öğrenece	eğimi kontrol ed	ebilirim.			
 17. Fen	Bilimleri dersind	eki çalışmalar ilç	gimi canlı tutar.					
 18. Fen	Bilimleri sınıfınd	aki hedeflere na	ısıl ulaşacağım l	konusunda seçe	neklerim			
vard	ır.							

### 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.

The instructor is respectful of me.							
O 1 = Strongly Disagree							
O 2 = Disagree							
O 3 = Somewhat Disagree							
O 4 = Somewhat Agree							
O 5 = Agree							
6 = Strongly Agree							

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. <a href="https://doi.org/10.1016/j.schres.2018.11.037">https://doi.org/10.1016/j.schres.2018.11.037</a>
  - $\circ$  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. https://doi.org/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:	
D		

#### **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 <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 gain in Cognitive Training are important for my future.

1 6
e Strongly
Agree
ee

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

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

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

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

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

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

6. The Cognitive Training activities are interesting to me.

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

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

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

8. I enjoy completing the activities in Cognitive Training.

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

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

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

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

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

11. My Cognitive Training instructor is friendly.

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

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

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

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

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

15. My Cognitive Training instructor is respectful of me.

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

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

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

17. The Cognitive Training activities hold my attention.

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

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

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

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

Date: \_\_\_\_\_

Completed by:

Directio	<u>ons</u>								
everythin exercise intereste The que	ems ask aboung you have ones, discussion hed in your hones ask your her what you be	done in cogni , and talking <u>est opinion</u> . u to select a	tive training with the instruction	when selectin uctor. There a our answer. F	g your answe are no right o	er including o or wrong ansv	ognitive vers - we are only		
1. T	The skills I ga	ained in Cog	nitive Traini	ng are impo	rtant for my	future.			
	1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Somewhat Agree	5 Agree	6 Strongly Agree			
2. I	was confide	nt that I cou	ld succeed i	n Cognitive	Training act	ivities.			
	1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Somewhat Agree	5 Agree	6 Strongly Agree			
3. N	My Cognitive	Training ins	structor care	ed about how	well I did ir	n Cognitive <sup>-</sup>	Training.		
	1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Somewhat Agree	5 Agree	6 Strongly Agree			
4. I	felt capable	of doing we	II in the activ	vities during	Cognitive T	raining.			
	1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Somewhat Agree	5 Agree	6 Strongly Agree			
5. I	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	Somewhat	Somewhat	Agree	Strongly
Disagree	_	Disagree	Agree	_	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	Somewhat	Somewhat	Agree	Strongly
Disagree		Disagree	Agree		Agree

8. I enjoyed completing the activities in Cognitive Training.

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

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

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

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

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

11. My Cognitive Training instructor was friendly.

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

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

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

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

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

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

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

15. My Cognitive Training instructor was respectful of me.

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

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

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

17. The Cognitive Training activities held my attention.

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

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

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

#### <u>Instructions for Scoring the MUSIC Inventory (Cognitive Training version for clients)</u>

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

## 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 <u>honest opinion</u>. Respond to the items below in relation to <u>one Cognitive Training group</u> using this scale:

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

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.

### 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 (<u>Jones, 2009, 2018</u>). 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 that ask 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**

- What could be changed in this course to help you feel you could be more successful in it? (<u>Jones et al., 2012</u>)
- 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? (<u>Jones et al., 2012</u>)
- 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)

#### **Effort**

1. Two questions: How much effort do you put into this course? Why do you put this amount of effort into this course? (<u>Jones, Byrnes, & Jones, 2019</u>)

• The first question is asked simply to get students thinking about how much effort they put into the course. Typically, we do not code the responses to the first question because we have already collected that information with the quantitative Course Effort scale. We code the responses to the second question. For examples, see <u>Jones</u>, <u>Byrnes</u>, <u>and Jones</u> (2019) and <u>Jones</u>, <u>Krost</u>, <u>and Jones</u> (2021).

### **Interview Questions for Students**

#### Where did these interview questions for students 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 (<u>Jones, 2009</u>). 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. <a href="https://www.niost.org/Afterschool-Matters-Fall-2017/using-video-game-design-to-motivate-students">https://www.niost.org/Afterschool-Matters-Fall-2017/using-video-game-design-to-motivate-students</a>

**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 other students 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). https://doi.org/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.
  - o Describe how you interacted with your group members.
  - O What would you change about the dynamics of your group?
- Describe your group's relationship with your advisor.
  - O What role did your project's advisor play?
  - o How does your advisor show respect and concern for your group?
  - O 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. <a href="https://doi.org/10.1111/ssm.12143">https://doi.org/10.1111/ssm.12143</a>

**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 teachers 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. https://www.isetl.org/ijtlhe/pdf/IJTLHE774.pdf

#### 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.

#### Citation

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. <a href="http://www.investigacion-psicopedagogica.com/revista/articulos/22/english/Art\_22\_499.pdf">http://www.investigacion-psicopedagogica.com/revista/articulos/22/english/Art\_22\_499.pdf</a>

• Also used in many other studies.

#### **Overall Instructor Rating**

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 instructor for this course.
  - 1 = terrible
  - 2 = very poor
  - 3 = poor
  - 4 = good
  - 5 = very good
  - 6 = excellent

#### Spanish Translation

- Mi calificación general del instructor del curso.
  - 1 = Terrible
  - 2 = Muy pobre
  - 3 = Pobre
  - 4 = Bueno
  - 5 = Muy bueno
  - 6 = Excelente

#### Overall Course Rating

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 course.
  - 1 = terrible
  - 2 = very poor
  - 3 = poor
  - 4 = good
  - 5 = very good
  - 6 = excellent

#### Spanish Translation

- 1. Mi calificación general del curso.
  - 1 = Terrible
  - 2 = Muy pobre
  - 3 = Pobre
  - 4 = Bueno
  - 5 = Muy bueno
  - 6 = Excelente

#### Validity and Reliability information

Because these ratings are single items (as opposed to scales with more than one item), alpha values cannot be computed. Therefore, internal consistency reliability cannot be assessed. However, criterion-related validity evidence can be assessed by examining the correlations between these items and the MUSIC Inventory scales.

The correlations between the MUSIC scales and instructor ratings and course ratings typically represent medium to large effect sizes:

- Pearson correlation coefficients (*r*) ranged from .41 to .69 for instructor ratings and .55 to .73 for course ratings (<u>Jones & Skaggs</u>, <u>2016</u>)
- Pearson correlations coefficients (*r*) ranged from .44 to .70 for instructor ratings and .49 to .63 for course ratings (Wilkins et al., 2021, student-level variables)
- Pearson correlations coefficients (*r*) ranged from .41 to .62 for instructor ratings and .42 to .72 for course ratings (<u>Jones, Miyazaki, et al., 2022</u>, student-level variables)
- Pearson correlation coefficients (r) ranged from .13 to .68 for course ratings (<u>Jones</u>, <u>Byrnes</u>, <u>& Jones</u>, <u>2019</u>)

### **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.

#### Citation

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. <a href="https://doi.org/10.5206/cjsotl-reacea.2019.3.9471">https://doi.org/10.5206/cjsotl-reacea.2019.3.9471</a>

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.

#### Spanish translation

- 1. Hago el mejor trabajo que puedo hacer en este curso.
- 2. Hago todo lo posible para que me vaya bien en este curso.
- 3. En este curso, hago mi máximo esfuerzo.
- 4. Hago todo lo que puedo para aprender el material en este curso.
  - 1 = Muy en desacuerdo
  - 2 = En desacuerdo
  - 3 = Parcialmente en desacuerdo
  - 4 = Parcialmente de acuerdo
  - 5 = De acuerdo
  - 6 = Muy de acuerdo

#### Validity and Reliability information

Jones, B. D., Krost, K., & Jones, M. W. (2021). Relationships between students' course perceptions, effort, and achievement in an online course. *Computers and Education Open, 2*, Article 100051. https://doi.org/10.1016/j.caeo.2021.100051

- $\alpha = 0.87$  (n = 1,446 undergraduate students)
- The Course Effort scale correlated with the MUSIC scales. The effect sizes were medium to large with *r* ranging from .39 to .59 in the online geography course in this study.

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. <a href="https://doi.org/10.5206/cjsotl-reacea.2019.3.9471">https://doi.org/10.5206/cjsotl-reacea.2019.3.9471</a>

• Five different courses:  $\alpha = 0.93, 0.87, 0.94, 0.83, 0.79$ .

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. <a href="https://doi.org/10.3389/fvets.2019.00011">https://doi.org/10.3389/fvets.2019.00011</a>

• The reliability estimates were very good across three samples of veterinary medicine students ( $\alpha$  = 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. https://doi.org/10.1007/s11218-019-09500-x

- $\alpha = 0.89$  (n = 355 undergraduate students)
- The Course Effort scale correlated with the MUSIC scales. The effect sizes were small to medium with *r* ranging from .23 to .36 in the psychology course in this study.

#### 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.

#### Citation

Jones, B. D., Krost, K., & Jones, M. W. (2021). Relationships between students' course perceptions, effort, and achievement in an online course. *Computers and Education Open, 2*, Article 100051. <a href="https://doi.org/10.1016/j.caeo.2021.100051">https://doi.org/10.1016/j.caeo.2021.100051</a>

#### Students respond to all 3 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. 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.

#### Past tense version

- 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.

#### Reliability information

Jones, B. D., Miyazaki, Y., Li, M., & Biscotte, S. (2022). Motivational climate predicts student evaluations of teaching: Relationships between students' course perceptions, ease of course, and evaluations of teaching. *AERA Open, 8*(1), 1-17. https://doi.org/10.1177/23328584211073167

•  $\alpha = 0.82$  (n = 2,949 undergraduate students)

Jones, B. D., Krost, K., & Jones, M. W. (2021). Relationships between students' course perceptions, effort, and achievement in an online course. *Computers and Education Open, 2*, Article 100051. https://doi.org/10.1016/j.caeo.2021.100051

•  $\alpha = 0.73$  (n = 1,446 undergraduate students)

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