

# Development of the *Dynamic Emotional Episodes to Music* (DEEM) Instrument – Expert Resource Document

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## Contact Information

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This is a reference document to assist you, the content expert, as you complete the first task to evaluate the content of the Dynamic Emotional Episodes to Music (DEEM) instrument. We are aiming to accomplish several goals from this task: reduce our item pool, produce an evaluation that our item content is reflective of the constructs we aim to measure, and add, rephrase, or omit content based on your expert evaluation. For this task, you'll provide relevance scores for each item and can input your opinion concerning any element of the instrument. We will amend, add, remove, or keep items based on your feedback. After this task, we will ask lay people to evaluate the understandability of the items and gauge response behaviour. Later, we may ask if you're available to participate in a second expert evaluation task, similar to this one, to finalise our item pool of the instrument before collecting data to conduct factor analyses. **The deadline for completing the first expert task, outlined below, is October 11th, 2024.** After the deadline, we will aggregate this first evaluation task data, send all experts a summary of the first round and move on to the next stage of the development.

# 1. Background

The development of this tool is related to the **Episode model: The functional approach to emotional experiences of music** by Eerola, Kirts and Saarikallio (2024, accepted to *Psychology of Music*, see preprint here: <https://osf.io/jkdax>). If you have questions regarding the theoretical development leading to this instrument that article will provide you with more background information.

In this document, we provide enough information for you to understand how we have defined the latent constructs we wish to measure ([Table 1](#)). Specifically, this document will act as a guide that you can use to determine the representativeness of each of our item's content against what we have defined. If you are interested in the details of how this instrument was developed, you can read about it in the [expanded document](#).

However, we also need your expert knowledge of psychological areas (concerning, but not limited to, emotion, memory, listening functions, goal-achievement, social behaviour, meaning construction, stimulus exposure, mood regulation, attention, reward, bodily-affects, agency, and qualia distinctions) to understand the constraints of this instrument. Incorporating these areas -allows us to interpret aspects of convergent and discriminant validity the instrument possesses at this initial stage.

Here, we provide basic definitions, a breakdown of the constituent parts of our areas of interest, a depiction of the content makeup, and a guideline for completing the task. A distinction we need to make is that this instrument aims to identify *emotional episodes* rather than distinct emotional experiences. Emotional Experiences are *classifications of qualia* (distinct-states like "happy" or "schadenfreude"), whereas, Emotional Episodes are *situated affectual states informed by an interrelated collection of subevents toward an object* (Russell & Barrett, 1999).

Qualia	An introspectively accessible account of what it is <i>like</i> to experience something
Emotional Experiences	An account or classification of a situation, event, and / or object.
Emotional Episodes	A situated affectual state informed by an interrelated collection of subevents toward an object.

The Episode Model (Eerola, Kirts, Saarikallio, 2024) theorised that five episodes along with six descriptive schemes reflect a concise framework to depict the most common emotional episodes a person may have while listening to music in a variety of situations. The five emotional episodes taken from the Episode Model are the following:

- 1) Enjoyment-Distraction-Relaxation (EDR):** Refers to episodes where the function for the individual to obtain, maintain, or enhance a positive mood or emotion that can include diversion away from stress, worry, and unwanted thought.
- 2) Connection-Belonging (CB):** Refers to episodes in which the functions for the individual to feel socially connected to others, ideas of belonging, kinship, cohesion with the group, or socialisation.
- 3) Focus-Motivation (FM):** Refers to episodes with functions for the individual being related to aspects of motivation, providing focus, and achieving concentration.
- 4) Personal-Emotion-Processing (PEP):** Refers to episodes which pertain to the functions of stimulating identity, recalling associations, self-expression, emotional support, and processing emotions.
- 5) Aesthetic-Interest-Awe (AIA):** Referring to episodes that pertain to functions such as being moved, elements of spirituality, detached emotions, “out of body” experiences, aesthetic or awe types of experiences.

In the Episode Model, descriptive schemes are proposed to inform differences between and within psychological processes relevant for different episodes. The descriptive schemes included in the DEEM instrument are the following:

- 1) **Functional Context:** Common strategies, rational, methods, and concepts associated with the application of music to achieve some purpose.
- 2) **Listening Modes & Agency:** Categorization of common types of attention for music listening and personal assessments of control over a listening period.
- 3) **Musical Meaning:** Distinctive attribute(s) of the music which are significant to the listener.
- 4) **Reward & Exposure:** Personal relations to the music in terms of exposure, familiarity, liking, and physical reward reactions.
- 5) **Situational Context:** Concepts related to the perception and cognition of an environment, the events which occur in a situation, and object/stimulus characteristics.

Concepts taken from a framework for situational research by Rauthmann and colleagues ([Rauthmann et al., 2015](#), p. 181-182) allowed us to differentiate the content further. We utilised the following four broad situational factors:

- 1) **Cognitive:** Processes of understanding sensory information, deciphering meaning within the context, and relating that meaning to prior experiences.
- 2) **Affectual:** The monitoring and regulation of affectual patterns to fit situational needs, which can also be preparation of strategies to meet affectual goals.
- 3) **Motivational:** Ranging from recollection or realisation of somatic action taken toward a stimulus to the cognitive processing of possible methods of achieving goals.
- 4) **Social / Transactional:** Pertaining to the roles, rules, and interactions between people in the same situation. Socio-cultural knowledge about what behaviour is “correct” and personal knowledge of connections between the stimuli and a person or group of people.

We broke these situational categories down into separate factors to differentiate our item pool further ([Table 2](#)). A little over half [289] of the items were adapted from the existing literature, the rest were created specifically to complete a matrix for the item pool content ([Table 3](#)). We then reduced the item pool to 345 items by removing and rewriting items with high semantic similarity. The reduced item pool is what is under investigation here in this first expert task.

Following quality conventions in item writing (Kline, 2015), the items have been phrased to reflect respondents' very recent or an ongoing emotional episode. For example, instead of phrasing an item as "Music makes me dance" our item would be phrased as "The music made me dance". Usually, item pools contain both positive and negative wording (e.g., "The music did not make me dance") but this can be difficult for future participants to understand, leading to measurement errors. All of the items in this instrument have been written with a positive interpretation.

## 2. Guidelines for the task

We need your help to evaluate the content of the items. We will be asking you to respond to each item individually but there are a few questions to keep in mind as you complete this task,

- How well do the items represent the descriptive schemes/episodes we are seeking to measure?
- What are the most relevant items for representing the descriptive scheme or episode?
- What aspects of the descriptive scheme or episode have we neglected to include?
- Are there concepts or whole domains or themes of interest not included that you find necessary?

For this first expert evaluation task, we are asking you to provide feedback about the content of the items we have developed or adapted. We are interested in obtaining three things, 1) a relevance rating for each item (1 = Not relevant, 2 = Slightly relevant, 3 = Moderately relevant, 4 = Extremely relevant), 2) opinions on content of items (issues, wording), and 3) construct feedback. If you feel like a concept has not been addressed properly, the item is unclear, or that the item is not logically cohesive to other items in a particular survey, dictate this in the free response option available for each item or at the end of the survey. We have grouped items by their descriptive scheme so you can focus on one area at a time.

There are 8 surveys to complete, which will be handled through Qualtrics. Qualtrics will allow you to pause and return to the survey at another time if you cannot complete it in the timeframe we have indicated. We would like you to

utilise this document while filling out these surveys. Particularly helpful will be [Table 1](#) as it contains all of the content specific distinctions for each descriptive scheme. We would like you to follow a particular order of completing the surveys, which has been communicated via email to you. Here are the order of the surveys:

Survey Order A			Survey Order B		
Survey	Time	Link	Survey	Time	Link
Listening Modes & Agency	30 - 45 min	LM&A LINK	AIA	15 min	AIA LINK
Musical Meaning	20 - 35 min	MM LINK	PEP	15 min	PEP LINK
Qualia, Reward, & Exposure	15 - 20 min	QR&E LINK	FM	15 min	FM LINK
EDR	15 min	EDR LINK	CB	15 min	CB LINK
CB	15 min	CB LINK	EDR	15 min	EDR LINK
FM	15 min	FM LINK	Qualia, Reward, & Exposure	15 - 20 min	QR&E LINK
PEP	15 min	PEP LINK	Listening Modes & Agency	30 - 45 min	LM&A LINK
AIA	15 min	AIA LINK	Musical Meaning	20 - 35 min	MM LINK

Thank you for your time and assistance in completing this task 😊

If you have any questions or concerns please contact Connor Kirts ([connor.g.kirts@durham.ac.uk](mailto:connor.g.kirts@durham.ac.uk))

**Table 1.** Breakdown of constructs within the descriptive schemes and a depiction of the content used to represent these constructs for music related emotional episodes.

Descriptive Scheme	Episode	Construct	Content depiction	
Functional Context	EDR	Enjoyment	Music used for the positive experience of itself or to conjure a desired effect from, entertainment, dance, play	
		Distraction	Music used to get away from worries and stressors, mediate boredom,	
		Relaxation	Music used to calm down, decompress, achieve low arousal state	
	CB	Group Cohesion / Socialisation	Music used to facilitate connection, bonding, express joint identity or values, show commitment to a group	
		Reducing loneliness	Music used to mediate loneliness, become apart of something, as a tool to dispel feelings of isolation	
	Functional Context	FM	Energy Control	Music used to control levels of intensity or drive, pumping up, motivation, stimulation
			Focus	Music used to maintain or enhance a mood, organise self or group coordination to a task
		PEP	Reflection / Coping	Music used to remember or to associate to other objects, provide sense of comfort, processing experiences
			Expressing feelings	Music used to release or communicate emotions, gain emotional insight, deal with a situation
		AIA	Being moved / Spirituality	Music used to connect to a higher ideal or abstract feeling of non-social connection, religious activity, feeling or seeking strong emotions
			Curiosity	Music used to prompt new experiences, drive or attraction toward stimuli
			Aesthetics	Music used to achieve or create a desired ambiance, fit to the "mood"

Listening Modes & Agency	Diffuse	Little to no attention directed at the music, choice of focusing on objects other than music
	Bodily	Potential embodied motor processes are attuned to the music, agency (or lack thereof) over body response toward music
	Emotional	Reflects intensity of emotional experiences one could have with music, level of control over emotions experienced
	Associative	Ideas, thoughts, and images prompted by the music, control over music to guide experience
	Structural	Listening emphasis on processing musical content; understanding structure, themes, syntax, or patterns of sound.
	Reduced / Causal	Careful, forensic analysis of sound done with a reflective mindset
Musical Meanings	Musical Structure	Imbued meaning associated to musical elements that are consciously important
	Self	Personal memories (couple songs, associations to people), self expression
	Source	Sociopolitical context, historical conditions, musicians' personae, performative interpretations
Exposure & Reward	Exposure	Mere-exposure to stimuli, perception of stimuli change, reward of finding something new
	Familiarity	Recollection of prior instances of liking stimuli, grouping of similarity, classification reward
	Preferences	Conscious liking toward stimuli, account of personal value, value judgements, rewarding interactions
	Physical reactions	Conscious acknowledgement of physiological sensations, or physical pleasure (sensory pleasure/displeasure)

**Table 2.** Breakdown of the situational factors used to differentiate the content of the descriptive schemes (+ indicates from Rauthmann, 2015).

Situational Factor	Distinction	Content depiction
Cognitive	Expectations	"Ongoing cognitive processes, expectations, anticipations, memories, imaginations, etc"+
	Knowledge of responses	Held belief obtained through some prior experience.
Affectual	Affective goals	Obtainment or achievement of a desired affective state.
	Strategies of regulation	Desire for or the planning of change from one affectual state to another.
Motivational	Action readiness	Knowledge of typical preparation tactics for the initiation of a response toward stimuli; "single, patterned, and sequential behaviors"+
	Goal achievement	"Opportunity for pursuing/attaining one or many common and personal goals that may foster or hinder each other or be unrelated."+
Social / Transactional	Interpersonal relationships	Connections between people and groups
	Socially imposed rules	"Subculturally shared beliefs of which behaviors are expressible, permitted, constrained, or required to be regulated for goal attainment."+
	Situational agency	Control or the ability to change elements of the environment; Cognitive control of stimulus effects and affect

**Table 3.** Depiction of an item matrix created for the purpose of organising content during the development of the items. (Item count reflects initial item pool, 495).

Situational Cues		Descriptive Schemes			
		Functional Context (12)	Listening Modes (6)	Musical Meaning (3)	Reward & Exposure (4)
Cognitive	Expectations	35 items	18 items	9 items	9 items
	Knowledge of responses	36 items	17 items	9 items	6 items
Affectual	Affective goals	28 items	14 items	8 items	1 item
	Strategies toward or away	30 items	13 items	6 items	0 items
Motivational	Action readiness	29 items	15 items	8 items	1 item
	Goal achievement	36 items	13 items	7 items	3 items
Social / Transactional	Interpersonal relationships	28 items	18 items	7 items	2 items
	Socially imposed rules	23 items	7 items	6 items	2 items
	Situational Agency	26 items	12 items	8 items	5 items

Constructs of the descriptive schemes are expressed numerically, 12 Functional Contexts, 6 Listening Modes, 3 Musical Meanings, and 4 Reward & Exposure (see Table 1).