

DEFINING EXERGAMING

Existing definitions and descriptions were referenced from divergent sources including but not restricted to the following:

WIKIPEDIA

Exergaming or exer-gaming (a portmanteau of "exercise" and "gaming") is a term used for video games that are also a form of exercise. The genre has been credited with upending the stereotype of gaming as a sedentary activity, and promoting an active lifestyle.

EXERGAMING WIKI

Exergaming is more than a combination of just “exercise” and “games,” since such a definition would include football. Instead, it is an activity that combines exercise with electronic game playing. By "exercise" we mean any activity that increases heart rate via muscular exertion. So while playing Dungeons and Dragons may indeed quicken your pulse, most of the heart-rate increase results from the excitement of the game rather than muscular exertion. By “electronic game,” we mean an activity played using either a computer, game console, or other electronic interface that has rules, goals, and feedback

ALASDAIR THIN

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By “electronic game,” we mean an activity played using either a computer, game console, or other electronic interface that has rules, goals, and feedback.

ExerGaming – defn 3. A possible stepping-stone to conventional sporting activities.

ExerGaming – defn 2. Something that keeps you motivated.

ExerGaming – defn 1. If you don't step, the video game controller won't work.

Here is a list of my thoughts on some of the features that the “Perfect” ExerGame should incorporate.

ExerGaming should be fun

ExerGaming should in be informed by exercise physiology

ExerGaming should incorporate the principles of motor skill development

ExerGaming should be safe to use

ExerGaming should adapt to the player's ability

ExerGaming should facilitate participation in conventional sports and activities

ExerGaming should promote habitual physical activity

ExerGaming should be adaptable for individuals with special needs

FURTHER CONSIDERATIONS IN DEFINING EXERGAMING

This definition considers the function and purpose of exergaming. It does not try to define exergaming products (exergames) but rather what is required to create an 'exergaming experience'. The imperative with defining exergaming, is to recognize its two synergistic components.

1. **Gaming:** Interactive video activity that involves interaction with a user interface to generate sensory feedback on a multimedia device. The gaming platform is irrelevant, it can be of any origin and form (console, PC, mobile phone, portable gaming device etc).
2. **Exercise:** Physical activity that is a planned, structured movement of the body designed to enhance physical fitness.

EXERGAMING DEFINITION (version 2)

Exergaming is the positive and engaging fitness 'experience' gained by combining **exercise** and **gaming**.

Amendments made to the original definition were principally brought about by comments from Sheryl Flynn, Alasdair Thin and Emily Rosenberry from Friday 28 August Skype Discussion session.

Sheryl:

Exergames- A novel exercise program that combines exercise with electronic technology that is engaging in such a way to improve ones overall health and fitness (my humble attempt)

Emily:

While at Gopher, we had a similar conversation when defining the category name for these products. The outcome at Gopher was such that "Exertainment" was the overarching name and "interactive fitness" and "exergames/exergaming" were subcategories. Any sort of product (such as the Makoto) that did not have a game console nor a video screen was considered "interactive fitness", any product with a video screen (and/or was dependent on a game console) fell within the "exergaming" subcategory. The requirements for a product to be categorized as exertainment were: 1. included a technological component (electronics), 2. that it was entertaining to the user and 3. It produced an elevated heart rate for the user.

EXERGAMING 'EXPERIENCE' RATING SYSTEM – FUNCTIONAL REQUIREMENTS

REQUIREMENTS	INCLUSIVE	COMMENT	GRADING (10)
MOTIVATION	1. MANDATORY	Ability to encourage the user to participate for the longevity of the program/game/service.	1 = min, 10 = max
ENGAGEMENT	2. MANDATORY	The level of involvement and attachment achieved by the exergaming experience.	1 = min, 10 = max
ENERGY EXPENDITURE	3. MANDATORY	Requirement for physical output above sedentary up to maximal effort.	1 = min, 10 = max
FUN	4. MANDATORY	Genuine playful, enjoyable and/or amusing participation	1 = min, 10 = max
MULTIMEDIA FEEDBACK	5. MANDATORY	An electronic device that allows visual/audio/tactile feedback.	
GAME RESPONSE TIME	6. MANDATORY	1:1 ratio of 'real time' physical action to the response from the game.	1 = min, 10 = max
CUSTOMISABLE	1. OPTIONAL	Important aspects of the experience can be altered and programmed to suit user preferences (able to combine exercises as preferred)	1 = min, 10 = max
SKILL LEVELLING	2. OPTIONAL	Beginner to advanced participation available	1 = min, 10 = max
BIOMETRIC FEEDBACK	3. OPTIONAL	Real-time presentation of the user's progress plus the storage and retrieval of the user's data.	1 = min, 10 = max
INTERVENTION CAPACITY	4. OPTIONAL	Promote interest in pursuing conventional exercise or activity as a result of participation in the Exergaming experience	1 = min, 10 = max
MULTIPLAYER	5. OPTIONAL	Encourages socializing through game involvement – local or online multiplayer experience.	1 = min, 10 = max
SAFETY	REQUIRED	A genuine effort to outline how to safely utilize the product/service that is understood by any and all participants.	1 = min, 10 = max

NOTE:

There are 6 MANDATORY components allow for a perfect score of 60 and 5 OPTIONAL components. The rating of an Exergaming 'Experience' is given in two parts.

1. M60 Rating: Possible score out of 60 for Mandatory components
2. O50 Rating: Possible score out of 50 for Optional components

The M60 Rating is critical. Should this score be below 30, then the O50 rating is irrelevant. The true value of the Exergaming experience is represented by the M60 Rating.

Safety must be a consideration for all fitness/health activities, regardless of whether it is an exergaming activity or a conventional activity.

EXAMPLE: Wii FIT – SINGLE ADULT USER

REQUIREMENTS	INCLUSIVE	COMMENT	GRADING (10)
MOTIVATION	1. MANDATORY	Ability to encourage the user to participate for the longevity of the program/game/service.	8
ENGAGEMENT	2. MANDATORY	The level of involvement and attachment achieved by the exergaming experience.	7.5
ENERGY EXPENDITURE	3. MANDATORY	Requirement for physical output above sedentary up to maximal effort.	7
FUN	4. MANDATORY	Genuine playful, enjoyable and/or amusing participation	8
MULTIMEDIA FEEDBACK	5. MANDATORY	An electronic device that allows visual/audio/tactile feedback.	8
GAME RESPONSE TIME	6. MANDATORY	1:1 ratio of 'real time' physical action to the response from the game.	7
CUSTOMISABLE	1. OPTIONAL	Important aspects of the experience can be altered and programmed to suit user preferences (able to combine exercises as preferred)	6
SKILL LEVELLING	2. OPTIONAL	Beginner to advanced participation available	7.5
BIOMETRIC FEEDBACK	3. OPTIONAL	Real-time presentation of the user's progress plus the storage and retrieval of the user's data.	7
INTERVENTION CAPACITY	4. OPTIONAL	Promote interest in pursuing conventional exercise or activity as a result of participation in the Exergaming experience	5
MULTIPLAYER	5. OPTIONAL	Encourages socializing through game involvement – local or online multiplayer experience.	3
SAFETY	REQUIRED	A genuine effort to outline how to safely utilize the product/service that is understood by any and all participants.	8

M60 RATING = **45.5**

O50 RATING = **28.5**

OVERALL RATING (110) = **74**