Gamification Body of Knowledge Guide
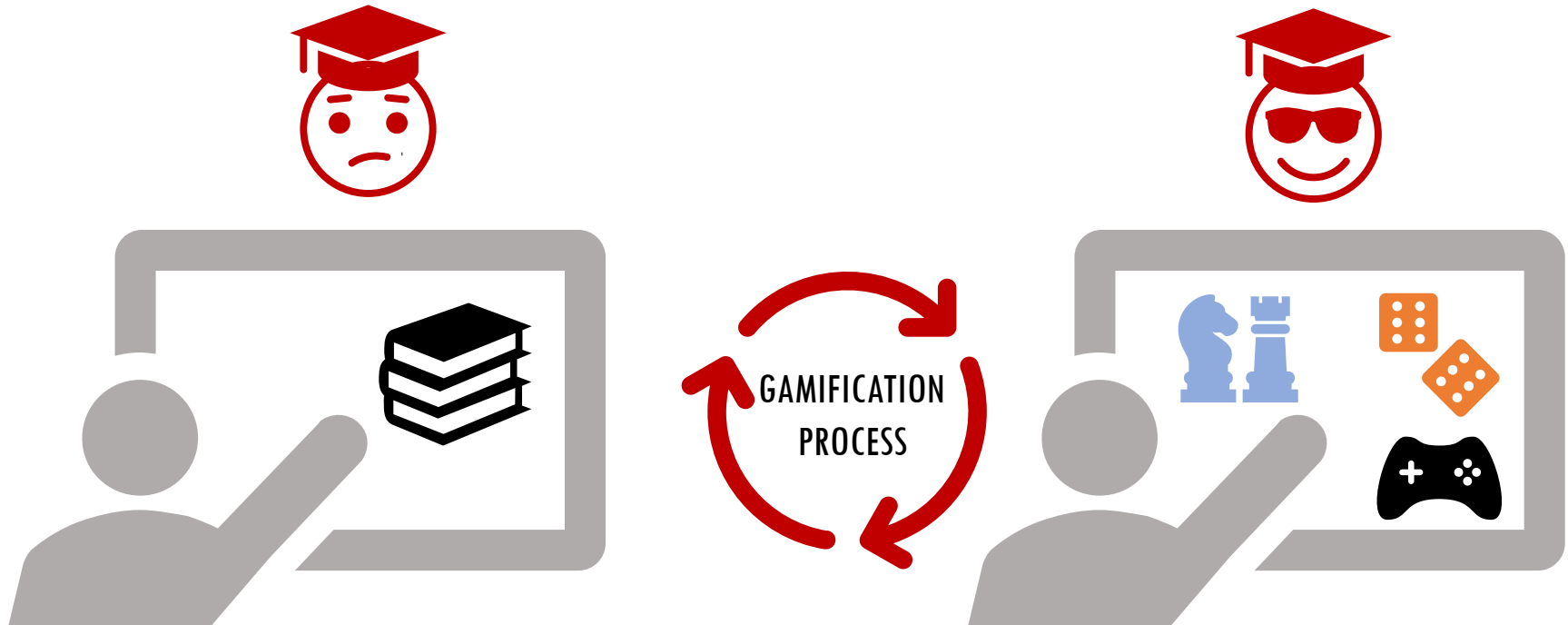
GAMIFICATION PROCESS

"New generations (Digital Natives) want to have fun, learn and play. They want work with purpose, meaning, identity, fulfillment, using creativity and leaving them with decision-making autonomy. Their perception of reality is shaped by the principles of World 2.0."

Gamification BoK GuideVision 👁

- For [teachers, trainers, lecturers (1st cycle, 2nd cycle, postgraduate studies)]

- who [would like to fully involve students into a learning process]

- the [**Gamification Body of Knowledge Guide**]

- is a [comprehensive gamified teaching methodological framework]

- that [provides detailed guidelines on how to gamify from scratch any subject/classes]

- unlike [traditional approaches to delivering classes that are inefficient and considered by New Generations as boring]

- our product [enables to implement gamification of subjects in the way that improves the attractiveness as well as efficiency and effectiveness of teaching processes].

Gamification Components

Goal

Introduction of a goal adds purpose, focus, and measurable outcomes. Goal provides a method to measure the quality of play or, at least, its certain aspects [1].

Storytelling

Storytelling allows learners a vicarious experience through the story which they can apply to their work situation or learning environment [1]. The elements that make this possible are:

- Characters

- Plot (something happens)

- Tension

- Resolution

Storytelling

A **story** within a game typically unfolds with a character encountering a problem or a situation.

The problem builds **tension** in the story as the character may not know what to do or how to react or, worse, may do the wrong thing.

Then a solution is offered in the form of a colleague, a moment of inspiration, or an idea (or even reading a policy); then results are presented in a positive manner [1].

Storytelling
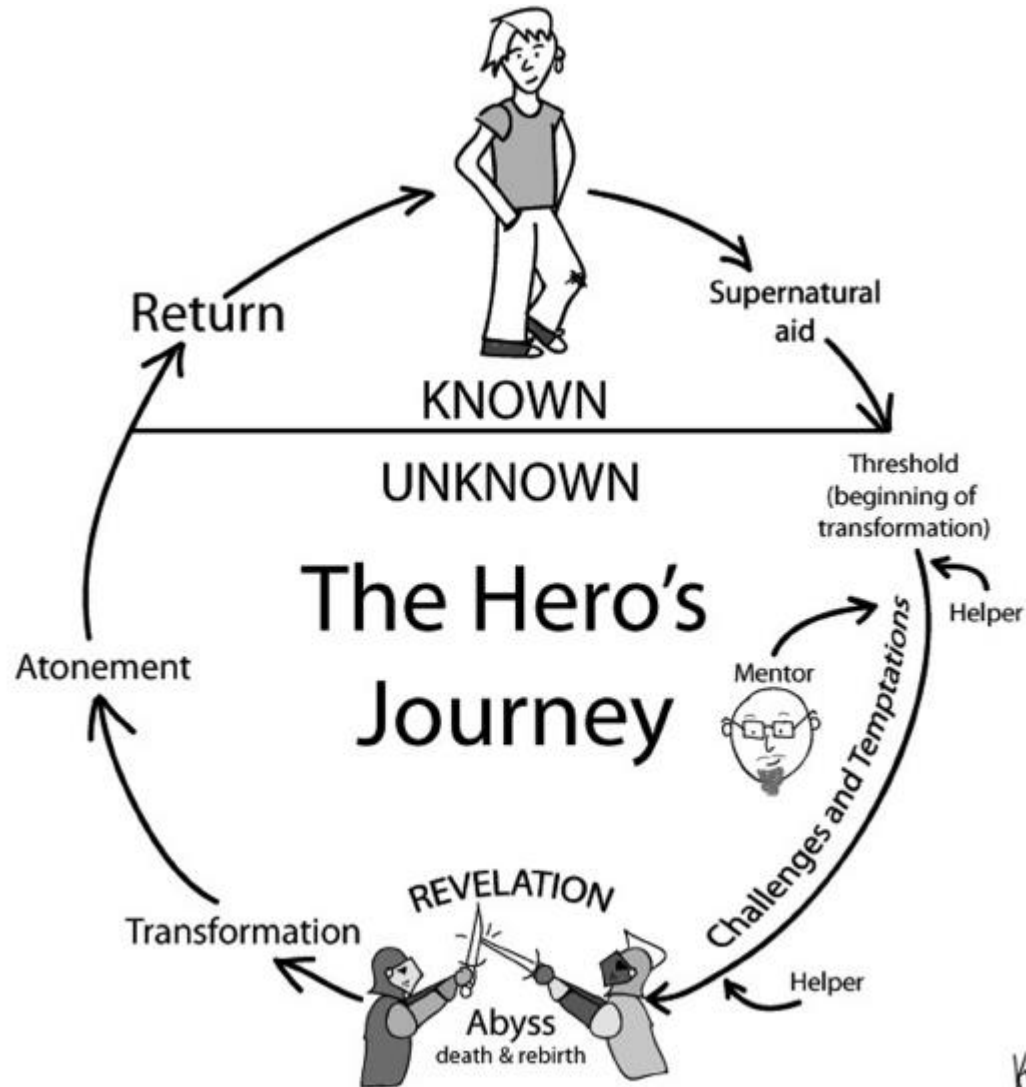
Gamified subject structure

Learning Outcomes

- Knowledge

- Skills

- Social

Gamified content structure

- Modules

- Missions

- Activities

- Actions

Learning Requirements

Gamification Requirements

Rewards Structures
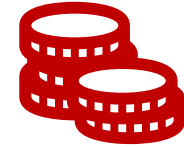
Badges, points, and other rewards motivate to making effort because:

- it's fun to obtain a high score on a game – points,

- it is just as fun to let others know you are the one who received the high score and to imaging being on the top of the leaderboard

#	NAME	SCORE
	THE LEADERBOARD	
1		2798
2	N. Hawkins	2764
3	B. Marten	2750
4	H. Chin	2682
5	G. Brown	2657
6	R. Olen	2571
7	E. Williams	2546
8	A. Johnson	2530
9	P. Ramirez	2511
10	D. Duncan	2459

Source: [1]

Rules

A game is just a set of **defined rules**. **Rules** are designed specifically to limit player actions and keep the game manageable [1].

- **Operational Rules.** These are the rules that describe how the game is played. E.g. collecting two thousand tokens allows you to buy a cooler snowboard.

- **Foundational Rules.** Underlying formal structures dictating game functionality. E.g. mathematical formulas used to calculate how many times the number 6 will appear on a die.

- **Behavior Rules.** Related to being a good sport about the game — game etiquette. Usually not written. Yet, they have a powerful influence over the game.

- **Instructional Rules.** Govern the learning within the process of the game. E.g. if the player selected a wrong answer, the inventory levels in the factory went up. So the player with the lowest score won the game, not the player with the highest score.

Rules

Time

- relates to game design and game play,

- is used as a motivator for player activity and action — serves to spur player action and to force the player to work under pressure,

- can also be a resource that needs to be allocated during a game — players can learn how much time they should spend on one activity while balancing their overall time allotment [1]

Rules

Interaction

Conflict — a challenge provided by a meaningful opponent. To win a challenge, the player must actively defeat an opponent.

Competition — opponents are "constrained from impeding each other and instead devote the entirety of their attentions to optimizing their own performance.

Cooperation — act of working with others to achieve a mutually desirable and beneficial outcome. The more individuals work together, the more they are able to achieve [1].

Rules

Feedback

- is designed to evoke the correct behavior, thoughts, or actions,

- indicates the degree of "rightness" or "wrongness" of a response, action, or activity. Informs the learner if he or she did the right thing, the wrong thing, or somewhere in the middle but doesn't tell the learner how to correct the action,

- provide information to the leaner to guide him or her toward the correct outcome [1].

Feedback characteristics:

- Timing
- Direction
- Content
- Form

Rules

Replay or Do Over

- In games, failure is an option — a good one. Allowing a player to fail with minimal consequences encourages exploration, curiosity, and discovery-based learning.

- It provides the opportunity to explore a set of rules, to test hypotheses, and to remember which approaches were successful and which ones failed [1].

Gamification Analysis & Design

Emphaty 😍

Interviews with students

Graduate Profile

Subject's Learning Outcomes
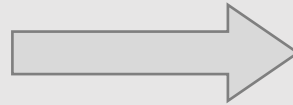
Learner's Persona
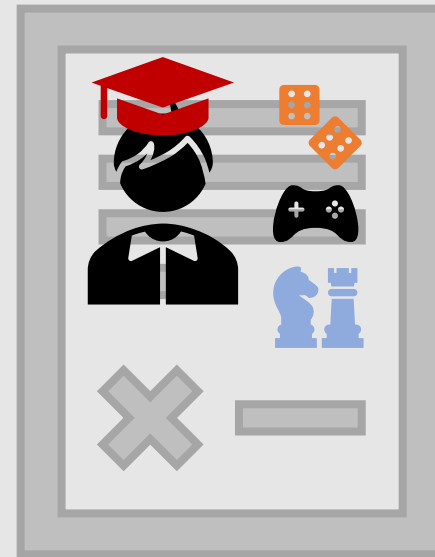
Problem Definition
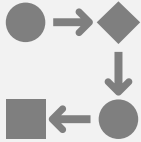
Learner's Persona
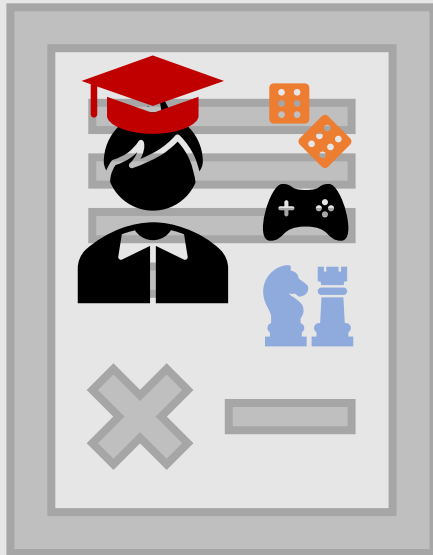
Knowledge Outcome

HMW	How Might We...	

Hard Skills Outcome

HMW	How Might We...	

Universal Skills Outcome

HMW	How Might We...	

How Might We Help…

HMW Question ❓

How Might We Help _____

(Lerner Persona's name)

_____

(Lerner Persona's characteristics)

_____

(Insight)

_____

_____

(Need)

_____

_____

Ideation 💡

Game 💡 Card	
🎯 **Goal**	*Short Goal Statement*
Plot	*Short Description (5-8 sentences) of plot idea*
👥 **Characters**	*Short Description of Characters*
🎓 **Target**	*Short Description of Target Group(s) Characteristics*
...	...

Ideation 💡

Activity 💡 Card

🧠	**Knowledge outcome**	Student is able to explain...
👥	**Activity**	Short description of expected behavior
🎯	**Why?**	How the actions done enable to meet learning requirement?
📋	**Results**	What are the expected deliverables of activity?
🏋️	**Difficulty level**	☑ Low ☐ Medium ☐ High

Prototyping

Game Card	
Goal	Goal Statement
Plot	Description of plot idea
Characters	Description of Characters
Reward Structure	Description of Rewards (points, badges,...)
Rules	Operational, Foundational, Behavior, Instructional
Interaction Type	Conflict, Competition, Cooperation

Prototyping

Activity Card	
Knowledge outcome	Student is able to explain...
Activity	Short description of expected behavior
Why?	How the actions done enable to meet learning requirement?
Results	What are the expected deliverables of activity?
Difficulty level	☑ Low ☐ Medium ☐ High

Time: How much should it take?   **Points:** how many points?

Prototyping

Activity Card

🧠 **Knowledge outcome**	
👥 **Activity**	
🎯 **Why?**	
✅ **Results**	
🏋 **Difficulty level**	☐ Low ☐ Medium ☐ High
⏳ **Time:**	💎 **Points:**

diverge

converge

diverge

converge

Empathize

Define

Ideate

Prototype
& Test

diverge

converge

diverge

converge

Students' Needs
Learning outcomes

Define
HMW Questions

Ideate possible
activities
missions
games

Prototype & Test
activities
game
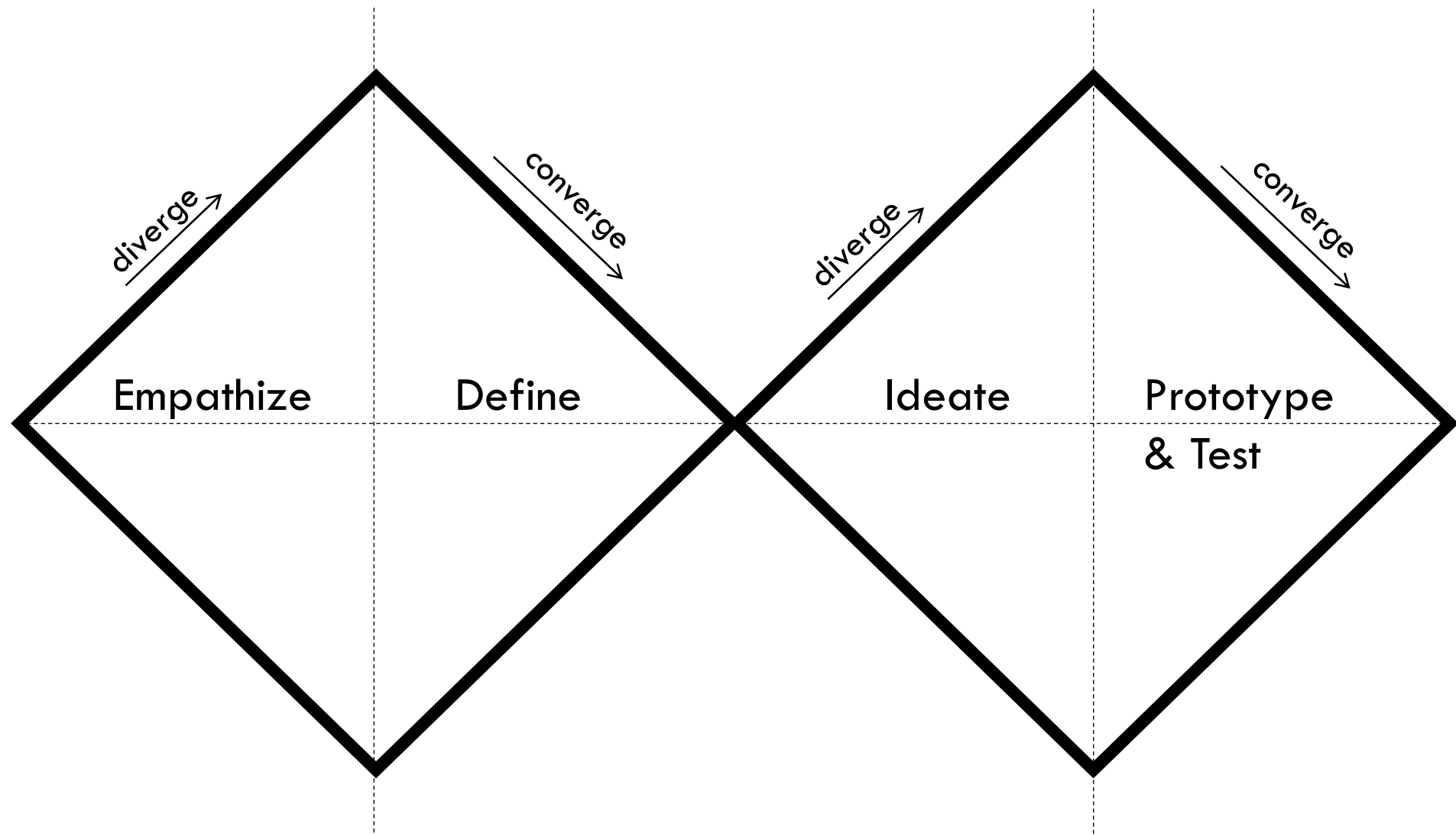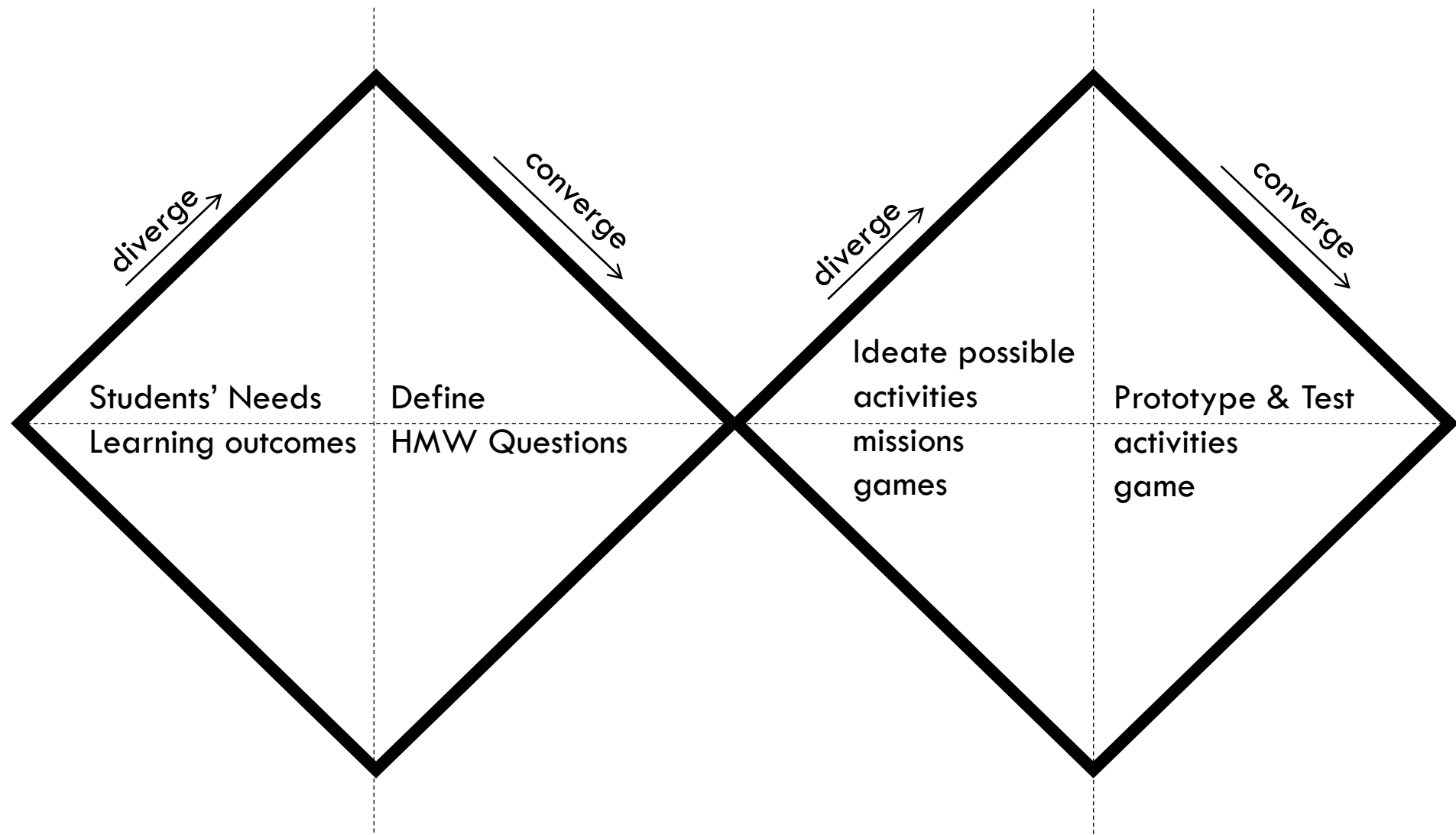
Gamification Development Framework

Empathy

Problem definition

Ideation

Prototyping & Testing

Gamified Subject Prototype Structure

Subject's Learning Outcomes			
Gamification Idea			
Game Card			
Module 1		...Module N	
Mission 1	...Mission N	Mission 1	...Mission N
Activity 1 Card	Activity 1 Card	Activity 1 Card	Activity 1 Card
Activity 2 Card	Activity 2 Card	Activity 2 Card	Activity 2 Card
Activity 3 Card	Activity 3 Card	Activity 3 Card	Activity 3 Card
Activity N Card	Activity N Card	Activity N Card	Activity N Card

Gamification Implementation Process

Learning Outcomes Elicitation & Analysis

Gamification Analysis & Design

Gamification Implementation

Gamification Assessment

Improvement
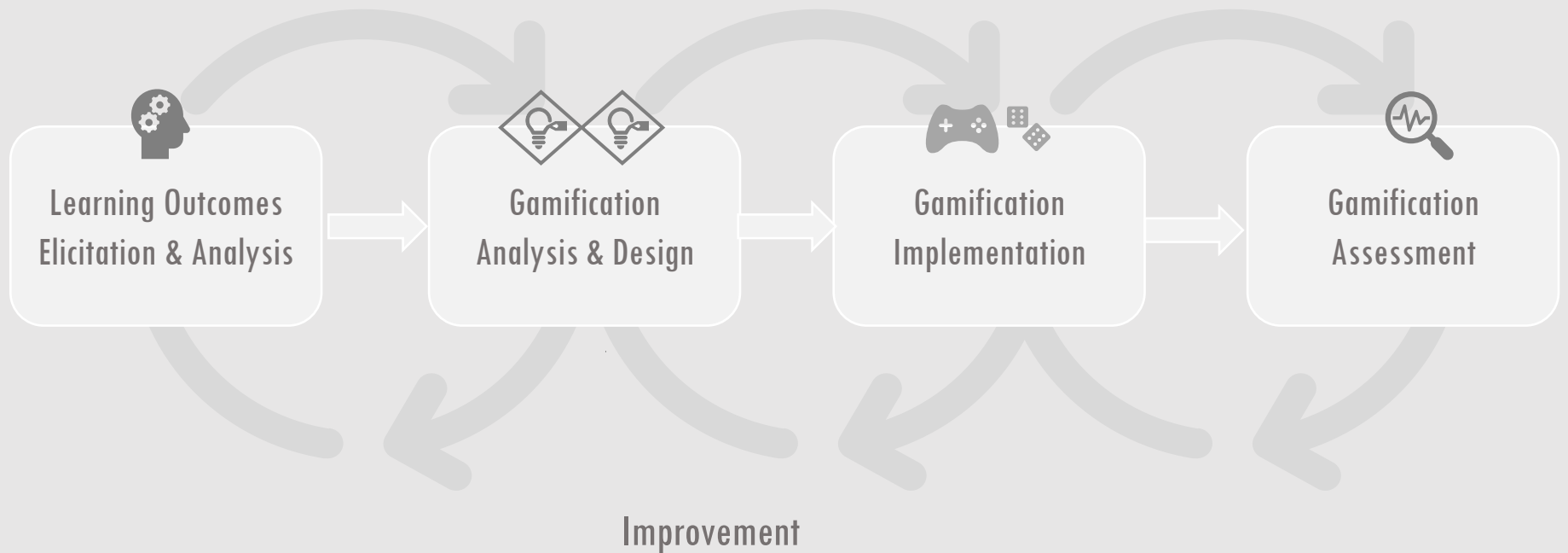
References

1. Kapp K., M. (2012) The Gamification of Learning and Instruction. Game-Based Methods and Strategies for Training and Education. Pfeiffer.
2. Kapp K., M. (2013) The Gamification of Learning and Instruction Fieldbook: Ideas into Practice. Pfeiffer.

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