

Document aim:

The document captures a common vocabulary for use by all mGBL WPs.

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Artifact:

Man-made object.

Authoring system:

mGBL system that enables authors to select and build m-learning games from templates efficiently.

Autonomy:

For Kohonen (1991: 4) autonomy:

,... involves a capacity for reflective and critical thinking. Autonomy does not, however, mean individualism and a neglect of the social context. Personal decisions are necessarily made with respect to social and moral norms, traditions and expectations. Autonomy thus includes the notion of interdependence ...

,A fully autonomous learner is totally responsible for making the decisions, implementing them and assessing the outcomes without any teacher involvement ... But the development of such independence is a question of facilitating the learner to manage his own learning.'

Nunan, (1997: 195) who finds true autonomy to be extremely rare, expresses similar views. He identifies five phases of progression towards autonomy:

- *awareness*
- *involvement*
- *intervention*
- *creation*
- *transcendence*

Blended learning:

Blended learning is understood as a mix of formal and informal learning, online and face to face) learning.

Career guidance services:

Services provided to young people on career pathways open to them and on relevant qualifications/experience/expertise.

Choice - anatomy of choice in a digital game:

In respect of game design, Salen and Zimmerman (2004: 65) propose the following ,anatomy of choice':

1. *,What happened before the player was given a choice (internal event)*
2. *How is the possibility of choice conveyed to the player (external event)*
3. *How did the player make the choice? (internal event)*
4. *What is the result of the choice? How will it affect future choices? (internal event)*
5. *How is the result of the choice conveyed to the player? (external event).'*

Cognitive processes:

For mGBL purposes, these are derived from Bloom's revised taxonomy of learning objectives (Anderson and Krathwohl, 2001):

- Remember: *Recall / Recognise / Retrieve*
- Understand: *Interpret / Exemplify / Classify / Summarize / Infer / Compare / Explain*
- Apply: *Execute / Implement*
- Analyse: *Attribute / Differentiate / Find / Interrogate / Organise*
- Evaluate: *Check / Critique / Hypothesise / Judge /Justify decisions*
- Create: *Generate solutions*

Competence:

'The ability to do a particular activity to a prescribed standard.' Definition coined by the Unit for the Development of Adult Continuing Education (UDACE 1989, 6 cited by Tight, 1996). A measure of what someone can do (as opposed to what they know) at a certain point in time. Hence a competence measure must have (*ibid*):

- a context
- an outcome
- clearly defined and measurable standards against which performance can be measured and accredited.

Bridges (1996) notes the critical response received by competence strategies:

"... for their conceptual imprecision and their behaviourist, foundation", including the argument that :

"... the competence approach displays confusion and incoherence in its interpretation and use of the ideas of 'knowledge' and 'understanding', and so should be challenged and resisted by educators committed to these values."

There are signs (*c.f.* SEEQUEL, 2004) that competence frameworks may already be outdated. For mGBL purposes therefore, the following generic Areas of Competence have been identified for optional use by authors, as they will be relevant to a wide range of vocational qualifications, including competence-based qualifications:

1. Managing and developing yourself
2. Working with others
3. Communicating
4. Managing tasks and solving problems
5. Applying numeracy
6. Applying technology
7. Applying design and creativity

Concept of information in a game:

Salen and Zimmerman (2004: 211) have this definition:

*'(Here) the concept of **information** refers to knowledge or content that is manipulated, acquired, hidden and revealed during play. ...*

(citing Pearce, 1997) four kinds of information in a game:

- *Information known to all players*
- *Information known only to one player*
- *Information known to the game only*
- *Randomly generated information'*

*, Information can contribute to meaningful play in two ways: **objective information**, the game system's internal information structure; and **perceived information**, the information that a player observes and acquires through play.'*

Core quality framework:

Framework defined October 2004 by the SEEQUEL (Sustainable Environment for the Evaluation of Quality in E-Learning) project, which has been co-funded by the European Commission, DG Education and Culture under the eLearning Initiative. The SEEQUEL core quality framework is:

„ ... a universal lens” that empowers any user from any education and training setting to look at eLearning quality with his/her eyes and at the same time to get a glance on how other people look at it. To achieve this, the SEEQUEL Core Quality Framework is based on a matrix where a list of common quality criteria applicable to the whole eLearning experience can be weighted by the various user profiles, enabling any category of stakeholders to position their perception of quality with respect to the perceptions of another

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stakeholders' category. This is in line with the fact that SEEQUEL is not aiming at a normative definition of quality, independently of the user profile, but that quality in e-learning can be different for different users, not obliged to adopt a common set of quality criteria. (Extract from the Introduction, page 3.)

Culture:

For game design purposes, Salen and Zimmerman (2004: 513) define culture as:

„...the context within which game play occurs’.

Deployment module:

Part of the mGBL platform: software to deploy mGBL game component.

Design:

The creation of meaningful experience:

„Design is the process by which a designer creates a context to be encountered by a participant, from which a meaning emerges.’

proposed by Salen and Zimmerman (2004: 47)

Draft folder:

A Draft Folder is where mGBL Drafts are automatically stored in the system until they have been validated (see above).

Draft mode:

This is the *default mode* for all Game Assets and Game Learning Objects that are authored in the mGBL system. The student author can only submit drafts to a particular Draft Folder (see below) as authorised by their teacher. Only that teacher has access to the draft once it has been submitted. The teacher then evaluates the draft. S/he then deletes/improves unsuitable drafts. The teacher validates suitable drafts and sends them to an appropriate Game Folder (see further below).

e-commerce:

Wikipedia definition (<http://en.wikipedia.org/wiki/E-Commerce>):

„Electronic commerce, commonly known as e-commerce or eCommerce, consists of the buying and selling of products or services over electronic systems such as the Internet and other computer networks. The amount of trade conducted electronically has grown dramatically since the wide introduction of the Internet. A wide variety of commerce is conducted in this way, including things such as electronic funds transfer, supply chain management, e-marketing, online marketing, online transaction processing, electronic data interchange (EDI), automated inventory management systems, and automated data collection systems. Modern electronic commerce typically uses the World Wide Web at least at some point in the transaction's lifecycle, although it can encompass a wider range of technologies such as e-mail as well.

A small percentage of electronic commerce is conducted entirely electronically for "virtual" items such as access to premium content on a website, but most electronic commerce eventually involves physical items and their transportation in at least some way.

E-commerce or electronic commerce is generally considered to be the sales aspect of e-business.“

e-health:

Seminal definition, cited by Wikipedia (<http://en.wikipedia.org/wiki/E-health>) published in the article What is e-health? J Med Internet Res 2001;3(2):e20, by eHealth researcher Gunther Eysenbach:

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„ e-health is an emerging field in the intersection of medical informatics, public health and business, referring to health services and information delivered or enhanced through the Internet and related technologies. In a broader sense, the term characterizes not only a technical development, but also a state-of-mind, a way of thinking, an attitude, and a commitment for networked, global thinking, to improve health care locally, regionally, and worldwide by using information and communication technology.”

Engaging, fun games:

mGBL sets out to design games that engage and are fun. According to Salen and Zimmerman (2004: 329 – 361), this means enticing the player to: *„Enter, Play, Stay’*. Prerequisites (*ibid*, 360):

- *„a challenging activity*
- *clear goals*
- *clear feedback*
- *the paradox of having control in an unclear situation.’*

Exemplar:

For D3.3 purposes, this is authored text for use with WP5 implementation of a D3.3 game model for user trials.

Experiential learning:

Experiential learning theory (Kolb, 1984), as Kohonen (2001) explains, invites conscious attention to the importance of the learner's subjective experiences, attitudes and feelings about their own learning, by including reflective observation as one of four key stages of a cycle of experiential learning. The Kolbian learning cycle is illustrated in Figure 1 below:

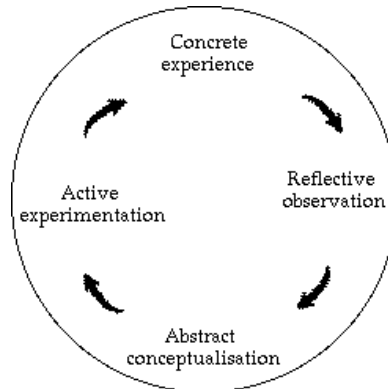


Figure 1. Kolb's learning cycle (Kolb, 1984: 42)

Furthermore Kolb's theory applies to all learners but primarily concerns adults and is therefore of particular relevance to mGBL.

Flow state:

Csikzentmihalyi (1900, cited by Salen & Zimmerman, 2004:336) researched what he termed a 'flow' state of mind, experienced when an individual participates in an activity and reaches a high level of focus and enjoyment.

Folder template:

A Folder Template is an mGBL system tool that a Teacher can use to designate a space for storing specific types of mGBL (e.g. relating to a specific learning need).

Game:

'Game' is recognised as '*organised play that gives us enjoyment and pleasure*' (Prensky, 2001: 118). Computer games (mobile games can be seen to fall into this category) are characterised by six key structural elements which, when combined together, strongly engage the player. These elements (*ibid*: 118–119) are:

- *“rules, goals and objectives*
- *outcomes and feedback*
- *conflict/competition/challenge/opposition*
- *interaction*
- *representation or story.”*

Salen and Zimmerman (2004: 83) see Games as a subset of play (= playful activities) and play as a subset of games. They propose (*ibid*: 79) a definition:

'A game is a system in which players engage in artificial conflict, defined by rules, that results in a quantifiable outcome.' (*ibid*, page 80)

They continue (*ibid*, page 189):

- *,Uncertainty is a key component of every game. ...*
- *There are two levels at which uncertainty operates in a game. On the micro-level are the actual operations of chance that occur at isolated moments in the system of a game. On the macro level are larger questions of uncertainty, which relate to the ultimate outcome of the game.'*

Game Asset:

Small item (e.g. text, picture, audio clip, video, clip etc.) that the mGBL author inputs into a game Template to implement a Game Learning Object (see further below). A Game is not itself designated as a Game Learning Object.

Game Authoring Tool:

Part of the mGBL platform (authoring system – see above): a tool / set of tools to enable easy authoring of a game and subsequent implementation via a Game Template (see further below).

Game Component:

A Game Component can be for example a Quiz, Simulation or mini-game. Unlike a Game Element (see further below) an mGBL Game Component may also constitute a game itself.

Game content item:

Same as Game Asset.

Game Element:

A Game Element is a very small part of an mGBL Game Component, e.g. an Element is a question that is 'tagged' with descriptors so that it is easily re-usable as part of other mGBL Game Component/s. Unlike a Game Component, a Game Element does not constitute a game itself.

Game Exemplar:

For mGBL this is an annotated script for use in D3.3 Game model implementation by WP5.

Game folder:

A Game Folder is where validated mGBL Games are sent by the Teacher, once s/he has validated them (see Draft mode above). A Teacher either identifies a suitable Game Folder for this purpose or creates one, using a Folder Template.

Game framework: rules, play, culture:

A model for game design proposed by Salen and Zimmerman (2004: 6 and 105)

- **RULES:** the organization of the designed system (contains **formal** game design schemas)
- **PLAY:** the human experience of that system (contains **experiential** game design schemas)
- **CULTURE:** the larger contexts engaged with and inhabited by the system (contains **contextual** game design schemas)

Game implementation:

This is the implementation of the D3.3 Game models by WP 5, for use in WP6 user trials.

Game Learning Object:

MGBL Game Learning Objects (GLO's) are authored Game Elements, Game Components and Hybrid Games. GLO's are 'tagged' by the author using keywords and acronyms as required by the Game Authoring Tool/Game Authoring Template. This 'tagging' enables them to be searched for in the mGBL database and re-used for different mGBL Game purposes. The approach can be seen to relate to Open Content and Open Source approaches (see further below).

Game logic:

Describes the rules of a game and the rationale behind it. Describes how the game goal can be reached by players and why the game is designed the way it is.

Game model:

For mGBL this is a text-based game design: a description of game features, functionality and logic that can enable creation of a Game Template.

Game module:

Same as game component.

Game scenario:

A learning situation presented within an mGBL game, utilising graphics – hence use of the term: 'scenario'.

Game schema:

Salen & Zimmerman (2004: 105) offer this definition:

'A way of organizing and framing knowledge. Schemas have the following characteristics:

- **Schemas have variables:** they provide a framework that can integrate new information.
- **Schemas can embed:** they can contain other schemas inside of themselves.
- **Schemas represent knowledge at many levels of abstraction:** they allow many points of view of the same object.
- **Schemas represent knowledge rather than definitions:** they are essentially „encyclopedic“ rather than „definitional“.'

Game selection tool:

WP3: software tool to assist the selection of appropriate game types for given learning goals, activities, content, audiences (target groups) and learning situations.

Game Template:

A set of pre-configured game rules, UI templates for user interaction, and the like, implementing a specific game logic. Represents the backbone of a game, which has to be customized and filled with content ('flesh') using a Game Authoring Tool (see above).

Game theory:

'Game theory is a branch of economics that studies rational decision-making. It often looks at and game-like situations but it is not a general theory of games or game design.'

Salen & Zimmerman (2004: 245)

Game traits – digital games

Definition proposed by Salen & Zimmerman (2004:91):

, 4 traits that summarise the special qualities of digital games:

Trait 1: *Immediate but narrow interactivity*

Trait 2: *Manipulation of information*

Trait 3: *Automated complex systems*

Trait 4: *Networked communication'*

Game type:

Describes the class that a game belongs to, e.g. Board, Hybrid, Pervasive.

Hybrid game:

An mGBL game that is composed of minimum 2 different components, e.g. mGBL Game 1, which consists of a Quiz component + a Simulation component.

Learning activities:

Generic terms (after Prensky, 2001) that might be used by mGBL game authors include:

- *Association*
- *Comparing*
- *Continuous practice*
- *Drill*
- *Experimentation*
- *Generate*
- *Imitation*
- *Making choices / practice*
- *Observation*
- *Playing in microworlds*
- *Problems*
- *Produce*
- *Questions*
- *Reviewing cases*

Learning content:

For mGBL project purposes this is primarily understood as content relevant to the fields of career guidance, e-commerce or e-health. Generic terms (after Prensky, 2001) that might be used by mGBL game authors include:

- *Behaviours*
- *Communication*
- *Creativity*
- *Facts*
- *Judgement*
- *Language*
- *Observation*
- *Procedure*
- *Process*
- *Reasoning*
- *Skills*

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- *Systems*
- *Theories*

Learning goal:

The goal that learners need to achieve (be it from their own or their teachers' perspective) from a learning point of view, e.g. generic terms such as those proposed in Bloom's revised taxonomy of learning objectives (Anderson and Krathwohl, 2001).

Learning mode:

The way in which learning is undertaken. For mGBL classification purposes, learning mode can be characterised as: individual/collaborative; single player/multi player mode.

Learning model:

A description of a learning approach, method or strategy (*c.f.* pedagogy), usually informed by learning theory.

mGBL learning models (*i.e.* mGBL game models) are informed by social constructivist (Vygotsky, 1978) learning theory (e.g. Argyris and Schön, 1978; Kolb, 1984) and by findings from mGBL User Requirements and mGBL User Trials research. The mGBL learning models (= D3.3 game models) are user-centred in that they take into account user needs and preferences in utilising the affordances of mobile technologies. Three mGBL learning (game) models have been designed to date. Descriptions of these are provided elsewhere (Krenn *et al*, 2007; Mitchell, 2007; Mitchell *et al*, 2007).

Learning objective:

Same as learning goal.

Learning paradigm:

Learning paradigm is understood as a view of what learning is, e.g.:

- *Instructional*: focus on content; directed learning, knowledge transfer (Tolman, 1932; Skinner, 1948)
- *Revelatory*: focus on student; discovery learning, intuition, revelation (Bruner; 1973; Ausubel, 1978)
- *Conjectural*: experiential, social learning; interdependence (Vygotsky, 1982; Kolb, 1984).

Learning process:

Learning takes time and patience - it is a process - a journey – from the unknown to the known, and involves a wide range of different learning processes. For mGBL these include: *“listening, observing, imitating, questioning, reflecting, trying, estimating, predicting, speculating, practising, which are among the most frequent, time-tested and effective learning processes that can be supported by mobile technologies.”* (Prensky, 2001). See also ‘Cognitive processes’ above.

Game rules:

,Rules constitute the inner, formal structure of games. All games have rules, and rules are one of the defining qualities of games. ... Following are general characteristics that all game rules share Salen & Zimmerman (2004:125):

- *,Rules limit player action*
- *Rules are explicit and unambiguous*
- *Rules are shared by all players*
- *Rules are fixed*
- *Rules are binding*
- *Rules are repeatable*

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The authors continue (*ibid*: 139) that the:

... rules of any game exist on three related levels:

- **Constitutive rules** are the abstract, core mathematical rules of a game. Although they contain the essential game logic, they do not explicitly indicate how players should enact these rules.
- **Operational rules** are the „rules of play“ that players follow when they are playing a game. Operational rules direct the players' behavior and are usually the kinds of rules printed out in instructions and rulebooks for games.
- **Implicit rules** are the „unwritten rules“ of etiquette and behavior that usually go unstated when a game is played. Similar implicit rules apply to many games.'

Learning situation:

'Learning situations' are countless and examples myriad. For mGBL some generic descriptors for the term are needed. We therefore understand 'learning situations' in terms of:

- learning goals
- learning activities and processes
- learning modes.

Lifelong learning:

“Lifelong learning is attitudinal; that one can and should be open to new ideas, decisions, skills or behaviors. Lifelong learning throws the axiom "You can't teach an old dog new tricks" out the door. Lifelong learning sees citizens provided with learning opportunities at all ages and in numerous contexts: at work, at home and through leisure activities, not just through formal channels such as school and higher education. Lifelong education is a form of pedagogy often accomplished through distance learning or e-learning, continuing education, homeschooling or correspondence courses.”

http://en.wikipedia.org/wiki/Lifelong_learning

m-Game, mobile game:

Game that is delivered *via* personal and portable mobile technologies, e.g. a game implemented as software running on mobile phones or PDA's, or a game facilitated by use of the mobile phone as a flexible tool. (See also: mGBL game).

Magic circle:

Salen and Zimmerman (2004: 99) refer to the ‚magic circle‘ of a game:

... the space within which a game takes place. Whereas more informal forms of play do not have a distinct boundary, the formalized nature of games makes the magic circle explicit. Within the magic circle, the game's rules create a special set of meanings for the players of a game. These meanings guide the play of the game.'

Metadata tags:

For mGBL these are descriptors that may be used within authoring templates for use by Game Authors in designating game components so that they may be identified on the mGBL platform:

- Game type: (e.g. Hybrid: Quiz + Simulation)
- Game mode: (e.g. single player)
- Game title:
- Author Code:
- Validator Code:
- Available from:
- Available to:
- Background image:

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- Topic:
- Sub-topic:
- Level:
- Disclaimer:
- Copyright statement:
- Resources:

See also: 'Tag'.

mGBL (mobile Games-Based Learning):

Learning supported *via* mobile games (m-games).

mGBL game:

A true game (*c.f.* Fabricatore, 2000) that engages the player in affective and cognitive learning and is delivered via personal and portable mobile technologies. Further defined as an organised game with measurable intended learning outcomes that support integration into curriculum delivery (*c.f.* Ellis *et al*, 2006), linked to decision-making in situations of uncertainty and utilising educational affordances of the mobile phone such as 'portability, social interactivity, context sensitivity, connectivity and individuality' (Naismith *et al*, 2004). An mGBL game should engage individuals and/or groups of users in challenges relevant to their interests, knowledge and expertise (*c.f.* Knowles, 1990) and be conducive to both adaptive learning and generative learning (*c.f.* Senge, 1990).

mGBL infrastructure:

Same as mGBL platform.

mGBL Platform:

The mGBL system, which

- provides basic features used by all games running on it (like user management, deployment, data logging, etc.)
- integrates other components, like the software selection tool, game authoring tools, game templates, profiling templates or other resource material.

mGBL simulation:

A scenario-based mGBL Game Component that requires the player to deploy knowledge and strategies and to cope with an element of chance. Like any mGBL Game Component, it can constitute a game in itself.

mGBL system:

Same as mGBL platform.

m-learning:

Learning facilitated by personal and portable mobile technologies:

- mobile phones;
- portable, dedicated gaming devices (such as the Nokia N-Gage);
- PDA's (Personal Digital Assistants).

Mobile games-based learning:

Learning that is delivered *via* personal and portable mobile technologies (see m-learning, above).

Mobile learning game:

A mobile game (*i.e.* a game that is delivered *via* personal and portable mobile technologies) that is specifically designed to support learning. (See also: mGBL game).

Mobile learning game implementation:

Game model that is implemented via mobile technologies to enable mobile games-based learning.

Mobile learning game model:

In mGBL, a text-based design document for a mobile learning game, showing how this is informed by research results, e.g. by findings from user requirements and user trials research and by learning theory, e.g. social constructivism (Vygotsky, 1978) and showing how the affordances of the mobile technologies are used to support learning.

Mobile technologies:

Personal and portable technologies, such as mobile phones and PDA's, and the technologies that enable them.

Monitoring Module:

mGBL module for monitoring game utilisation and evaluation of learning success.

Open content:

The term 'open content':

"...coined by analogy with 'open source', describes any kind of creative work (including articles, pictures, audio, and video) or engineering work (i.e. open machine design) that is published in a format that explicitly allows the copying and the modifying of the information by anyone; not exclusively by a closed organization, firm or individual. The largest open content project is Wikipedia."

(http://en.wikipedia.org/wiki/Open_content)

Open source:

Open source:

„... describes the principles and methodologies to promote open access to the production and design process for various goods, products, resources and technical conclusions or advice. The term is most commonly applied to the source code of software that is made available to the general public with either relaxed or non-existent intellectual property restrictions. This allows users to create user-generated software content through either incremental individual effort, or collaboration."

http://en.wikipedia.org/wiki/Open_source

Pedagogy:

Learning and teaching methods and strategies.

Pedagogical framework:

For mGBL: a description of the pedagogy (see above) and theories that inform mGBL design and development processes and outputs.

Peer group:

A peer group:

"... is a group of people of approximately the same age, social status, and interests."

(http://en.wikipedia.org/wiki/Peer_group)

Peer learning:

Learning with and from members of your peer group (see above). 'Peer learning' is essentially a social-constructivist (Vygotsky, 1978) concept, which sees learning not as an individual act alone, but as interpersonal in nature and social in context. Specific theories informing the mGBL game

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design process include for example Vygotsky's (*ibid*) theory of the 'zone of proximal development', *i.e.* the level of development that learners achieve when they engage in social behaviour is greater than they can achieve when working alone.

In mGBL, peer learning is primarily supported via use of mobile blogs and wikis to facilitate shared learning experiences and discussion of learning issues, whereby 2 main areas of focus are to be encouraged:

- efficient use of strategies, procedures and techniques – *a co-operative approach* (*c.f.* Small, 2000).
- considering the norms/assumptions underpinning group decisions, subjecting these to critical scrutiny from a number of different perspectives in turn (e.g. de Bono, 1967) - *a collaborative approach* (*c.f.* Small, 2000).

Pervasive game:

A multi-user mobile game that uses mobile technologies to bridge virtual world with real world activities (*c.f.* Benford *et al*, 2005); in our case it uses the web-enabled mobile phone to support a competition between teams of students who investigate critical situations and propose solutions.

Play, meaningful:

Meaningful play: 2 definitions (intertwined) proposed by Salen and Zimmerman (2004: 37):

- *Descriptive definition: .. ,the process by which a player takes action within the designed system of a game and the system responds to the action. The meaning of an action in a game resides in the relationship between action and outcome. '*
- *Evaluative definition: ,Meanigul play is what aocurs when the relationships between actions and outcomes in a game are both **discernable** and **integrated** into the larger context of the game.'*
- *,**Discernability** means that a player can perceive the immediate outcome of an action. Integration means that the outcome of an action is woven into the game system as a whole.'*

,Complexity is intrinsically linked to meaningful play' ... if a system is emergent, exploring possible relationships among game elements is continually engaging. Players will play a game again and again if something about the experience continues to engage them with ,,variety, novelty and surprise“.

(*ibid*: 165)

Play, reasons for:

Salen and Zimmerman (2004: xiv), considering what motivates someone to play a computer game, identify the following reasons for playing the popular game *,Pong'*:

- *Simple to play*
- *Every game unique*
- *An elegant representation*
- *It's social (takes 2 to play)*
- *It's fun (pleasure of competition, tactile manipulation of the knob)*
- *It's cool (low-fi graphics of classic arcade gaming; evokes nostalgia for video games).*

Procedure:

Wikipedia definition:

“.... specification of the series of actions, acts or operations which have to be executed in the same manner in order to obtain always the same result in the same circumstances (for example, emergency procedures). Less precisely speaking, this word can indicate a sequence of activities, tasks, steps, decisions, calculations and processes, that when

undertaken in the sequence laid down produces the described result, product or outcome. A procedure usually induces a change.”

<http://en.wikipedia.org/wiki/Procedure>

Prototype:

A design artifact that is created to test the function of the new model before starting implementation. (c.f. entry at: <http://en.wikipedia.org/wiki/Prototypes>)

Quiz:

MGBL: a Game Component that contains a set of Question Elements (questions), e.g. for knowledge-testing.

Recognition-primed decision-making:

Recognition-primed decision-making (Klein, 1998), *i.e.* a blend of intuition and analysis:

... arriving at feasible courses of action followed by conscious and deliberate review of the courses of action'

(Wikipedia, 2007).

Repository:

A 'library' or space on the mGBL platform in which learning objects (see below) are stored. The Game Learning Objects can be retrieved from the repository by an mGBL author.

Reusable Learning Object:

Reusable learning objects are defined (CETL, <http://www.rlo-cetl.ac.uk/faqs.htm>) as: *“web-based interactive chunks of e-learning designed to explain a stand-alone learning objective. The fact that the learning object has been broken down to a low level of granularity facilitates its reuse in different learning and teaching situations.”* CETL (*ibid*) points out that learning objects tend to be defined in a very technical way and highlights the importance of incorporating appropriate pedagogy into the effective use of learning objects: mGBL therefore uses *pedagogical* as well as technical descriptors for the its reusable learning objects, which it calls: 'Game Learning Objects' (GLO's), e.g.: Game Elements, Game Components – see definitions above).

Sign:

Used in the context of 'design', definition proposed by Salen and Zimmerman (2004: 47)

1. *A sign represents something other than itself.*
2. *Signs are interpreted.*
3. *Meaning results when signs are interpreted.*
4. *Context shapes interpretation.*

Simulation:

Salen and Zimmerman (2004: 457) offer the following definition:

„A simulation is a procedural representation of aspects of „reality“.

Single-loop learning; double-loop learning:

According to Argyris and Schön (1978), simple detection and correction of error is *„single-loop learning'*. However to arrive at *new* solutions, the ability to reflect in- and on- action is needed, to identify and correct error in ways that may involve modification not just of *processes* but also of underpinning *norms and objectives*. This is: *‘double loop learning'*.

Social constructivism:

mGBL learning game models are developed within a social-constructivist paradigm. Social constructivism (Vygotsky, 1978) emphasises intrinsic learning through social interactions and

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interactions with tools, is learner-centred, accepts plurality of perspectives and is associated with life-long learning processes (e.g. Kolb, 1984). (See also: Peer learning, above.)

System:

Definition proposed by Salen and Zimmerman (2004: 55):

„A set of parts that interrelate to form a complex whole. ... There are four elements that all systems share:

- **Objects** are the parts, elements or variables within the system.
- **Attributes** are the qualities or properties of the system and its objects.
- **Internal relationships** are the relations among the objects.
- **Environment** is the context that surrounds the system.’

See also: mGBL system, above.

Tag:

D3.3 use:

- *Noun*: one of a set of relevant keywords/terms assigned to designate a Game Learning Object.
- *Verb*: to assign a Tag (see above), e.g. to a Game Element, Game Component, Hybrid Game.

See also: ‘Metadata tags’.

Target audiences:

MGBL target audiences are defined as young people aged 16-24 (and their teachers), who have an interest in mobile technologies and mobile games. Audiences will be primarily those who are particularly interested in career guidance, e-commerce and/or e-health. Audiences may further be differentiated by mGBL authors, e.g. by use of the Core Quality framework developed by the SEEQUEL (2004) project or by Gardner’s (1983) seven intelligence types:

Intelligence type	Capability and perception
Linguistic	Words and language
Logical-mathematical	Logic and numbers
Musical	Music, sound, rhythm
Bodily-kinesthetic	Body movement control
Spatial-visual	Images and space
Interpersonal	Other people's feelings
Intrapersonal	self-awareness

Table 1. Gardner’s seven intelligences

Triage:

Triage is a methodology developed for use in critical first aid situations. Triage principle:

- *SAVE THE ONES WHO CAN BE SAVED / MAKE THE BEST OF IT!*
- *Interpret (What has happened)*
- *Discriminate, evaluate (Use accepted discriminators)*
- *Make a decision*

Source: internal Anglia Ruskin document: teaching handout (Health Care Practice).

User panel:

In the mGBL context, the respondents recruited for the User Requirements research.

Virtual learning environment (VLE):

Wikipedia has this definition:

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“A virtual learning environment (VLE) is a software system designed to help teachers by facilitating the management of educational courses for their students, especially by helping teachers and learners with course administration. The system can often track the learners' progress, which can be monitored by both teachers and learners. ...

These systems usually run on servers, to serve the course to students as internet pages. ... Components of these systems usually include templates for content pages, discussion forums, chat, quizzes and exercises such as multiple-choice, true/false and one-word-answer. Teachers fill in these templates and then release them for learners to use. New features in these systems include blogs and RSS. Services generally provided include access control, provision of e-learning content, communication tools, and administration of the user groups.”

Source: http://en.wikipedia.org/wiki/Virtual_learning_environment

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