

Reward Model (Project Deliverable no. 6)

Overall Summary

This deliverable describes our thoughts and findings about how to improve participant's motivation by means of rewarding them. The result is a prototypic reward model and an example of how it is instantiated by a course.

It is linked to the other deliverables in this work-package and the work-packages 3 and 4 of the AVALON project. It is a "living" document during the project live-time, starting with basic assumptions prior designing the action learning events and will later incorporate the lessons learnt from the actual execution of these learning events.

-

Table of Contents

1. Audience	2
2. Motivation	2
3. Integration into AVALON	2
4. Reward model development	3
General Approach	3
What to give a reward for?	3
Whom to give a reward?	3
What reward?	3
Methodology in the Avalon Project	4
Basic assumptions	4
5. How to apply these basic assumptions to Avalon's virtual world teaching scenarios	4
We are all little kids that need candy (at least from time to time)	4
There is no stronger motivation than social motivation	4
There are more types of rewards than we think at first glance.	5
There are more types of assessment-mechanisms that yield rewards than we think at first glance.	6
A reward model is a powerful tool for the course designer / educator	7
A reward model is a powerful tool for the participant.	7
Examples	7
6. Reward model design recommendations	8

1. Audience

The special focus of this deliverable is to model those meta-data features, which are reflecting the motivation why people would like to participate and stay in action learning events. Thus the intended audience of this deliverables are course designers, content creators and educators delivering the course.

2. Motivation

Why do we need to think about reward models?

Let's first think about why do people decide to participate in a language course? Obviously, because they (or at least the logical component of their brain) consider it being important to improve their language skills. What makes people stay in the course although their timetables are loaded with other duties? At this point it becomes useful to address the emotional part as well - and this is, what a reward model should do. It should reward participants for their achievements, thus motivate them to stay and do more. There is no doubt, that improving language skills is a big reward on itself, but, in our hearts, we are all little kids, that want to get some candy from time to time.

It's a nice feature of virtual worlds, that these candies can be realised quite simple. It's another nice feature of virtual worlds that social motivations (that are clearly among the most powerful motivational factors for human beings) can also be supported very well – thus they become a central element of our proposed reward model.

3. Integration into AVALON

In the Avalon-project we use reward models for several reasons:

- We want to experiment with reward models: What works well? What doesn't? This is an important information that we want to deliver during the trainer's course.
- We want to make the best possible usage of what virtual worlds offer for teaching. Having well-motivated students is a crucial issue.
- We want to create a positive memory in the participants. They should 'anchor' some positive experiences with their participation in the course.
- We want to make our courses "visible" - also outside avalonlearning-island (which is useful for dissemination)
- For some courses we want to create a competitive environment e.g. the business course, the debating course
- We want to point out, that there is a huge variety of approaches to rewards. We need to think further than stars, gold and silver swords!
- We want to promote reward models as an integral part of each course design in a virtual world. Using a reward model forces the course designer not only to think about how to motivate the participants, but concretely to think about how the student's achievements can be measured and against what goals.

Some members of the Avalon-team wrote an article on reward models, which was published at the ICIS 2010. It gives a profound background information about that topic and is highly suggested as further reading:
<http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5534711>

4. Reward model development

General Approach

When introducing a reward model into a course several issues must be considered:

- The type of students
- What are they interested in?
- What would motivate them best?
- The objectives of the course: The rewards must be strictly tied to the course's objectives, in other words, students that get a reward should have acquired some of the skills that the course designer had in mind. There is the potential that the dynamics of a course change in an unexpected and undesirable way as soon as the rewards become adapted by the student's community (e.g. students trade rewards amongst each other instead of winning them on their own; students specialise in certain fields, where they get most rewards).
- The budget: Rewards often cost money - there must be a budget for it.

What to give a reward for?

Normally a course has a primary goal (e.g. improving fluency and self-confidence in business situations), but beside that, there might be other dimensions, that are important for the success of a course, thus should be rewarded as well. Good examples are social skills (e.g. teamwork), technical skills (mastering the environment) or creativity.

Whom to give a reward?

Part of this question is classical grading: A measurement-process is needed that maps achievements to rewards. It should be comprehensible and fair. With a good set of criteria, we can (ideally) track activity and progress of each participant. Depending on the course (goals), student level and trainer resources some of the following criteria might be used for assessing language skill (for each criteria there should be a qualitative description of what assessment means):

- Successful communication: How was 'the message' delivered? Sub-criteria: fluency, self-consciousness, manner of appearance
- Complexity of used language
- Correctness of the used language: Sub-criteria: grammar, wording, pronunciation, spelling (in case of written assignments), ...
- (Preparation / Homework)
- Effort
- Contribution

The model should be flexible enough to reward very individual achievements, e.g. "special award for the best presentation ever given by someone who thought he could never speak in public".

What reward?

There are 2 main kinds of rewards:

- **tangible rewards:** money, either in the virtual world's currency or real money; real life items, e.g. textbooks, amazon-vouchers; virtual world items, e.g. Avatar's equipment, Bablefish-translation tool, skills
- **intangible rewards:** status; benefits; permissions

Which awards you choose depends on the institution, the budget, the community and the characteristics of the virtual world used.

Methodology in the Avalon Project

- At first we collected some basic assumptions based on the team's experience and research that was already done.
- Then we transformed them to the type of learning scenarios, pedagogy and technology that we use in our courses.
- We tried them out in various courses, updated our findings and finally came up with a set of easy-to apply design recommendations.

Basic assumptions

1. We are all little kids that need candy (at least from time to time).
2. There is no stronger motivation than social motivation – thus this must be exploited.
3. There are more types of rewards than obvious at first glance.
4. There are more types of assessment-mechanisms than obvious at first glance.
5. A reward model is a powerful tool for the course designer / educator.
6. A reward model is a powerful tool for the participant.
7. Rewards are the driving force behind motivation

5. How to apply these basic assumptions to Avalon's virtual world teaching scenarios

We are all little kids that need candy (at least from time to time)

It's a nice feature of virtual worlds, that these candies can be realised quite simple. A simple way to stand apart from the crowd is an optical difference. For example the color of a students' hats could change according to their reputation gained in the learning community or they could wear a shirt with some text on the chest; they could have another title (floating above their heads), or some special equipment.

Thus there is a big variety of possible rewards that do not cost anything but the instructor's brainpower.

There is no stronger motivation than social motivation

Think about your last workout: Did you do it alone? Or did you have an appointment with a friend? Think

about how more often you do hard activities, when there is some other person, that's doing it with you!

Things that are done in virtual worlds feel real.

Activities with people in a virtual world result in a truly social experience.

The brain does not make a difference between experiences that happened in virtual worlds and in the real world. Even if the world is virtual: The experience, the learning, the collaboration and communication with people does not only feel real, but IS real. This is a strength of the 3D medium – which needs to become exploited.

How can social motivation be exploited using virtual worlds? Some examples:

- Give participants the chance to get to know people that are interesting and important for them (e.g. share common interest, work in similar fields)
- Foster teamwork! Especially in language learning settings teamwork is an excellent way to practice language skills.
- Make sure, people stay in touch also between the life sessions (e.g. via a forum or facebook)
- Offer challenges to the teams, that include all team members in a specific way (e.g. adapt them to the team member's special skills or distribute roles among the team members and expect each team member to contribute from the perspective of his or her role)
- Use peer feedback as one means to express appreciation for the students skills, views and abilities. Restrict the teacher's role to the fields of his/her real competence (e.g. correct language use) and otherwise leave the stage to the students!

How could that be reflected in reward models? Some examples:

- Give rewards to teams, not only to individuals
- Give rewards that strengthen teams, e.g. an extra challenge
- Make social behaviour (e.g. helpfulness, fairness, collaboration) an explicit reward

There are more types of rewards than we think at first glance.

There are many different categories of reward. The literature mostly lists the following four: Glory, Sustenance, Access, Facility.

Applied to our teaching scenarios, this could mean the following:

- **Glory:** reputation and status. E.g.:
 - name listed on a 'hall of fame'
 - membership in a special group, special role or title. The status could be reflected by group membership and/or title, thus students would be promoted from their default state ("Avalon tourist" or "Avalon student") to maybe Avalon Entrepreneur, Avalon Ambassador, Avalon Cyber / Geek (technical), Avalon Mediator (social), Avalon Scout, Avalon Handyperson, Avalon Roadie
- **Sustenance:** E.g.
 - money (Linden\$ or own currency)
 - items: clothing, gestures, animations, tools (e.g. Bablefish translation-tool), ...
 - real-life items: books, vouchers for online-stores

This document is licensed under a Creative Commons Non-Commercial-Share-Alike Licence. For further details see: <http://creativecommons.org/>

- free space on Avalon-island
- free language training
- **Access:** E.g.
 - to private seminars
 - to secret rooms
 - to meetings with important people (e.g. the island managers)
- **Facility:** the possibility to do more (by more skills or more privileges) E.g.
 - building rights
 - peer voting

Beyond those 4 'explicit' rewards, we can also think of rewards in a more general way: Everything that contributes to the student's motivation could be seen as a part of the reward model – borders between 'course design' and 'reward model design' are floating. In this category we consider being especially appropriate for teaching in virtual worlds:

- **Fulfilment of a wish:** In some scenarios, students might develop a certain wish (e.g. becoming the project manager of his or her team). Its fulfilment could e.g. be tied to the student's performance at the job interview in class. This example is also interesting because it happens at the interface between the virtual world and the real world: What the student does in class (in the virtual world) has a direct effect on his or her real-life situation of being part of a project team. Being appointed project manager of the team is a strong award – if this is, what the student wanted (related to 'glory')
- **Floor:** Letting the floor to the students – to let the students shine (also related to 'glory')
- **Written feedback:** Feedback from the teacher in form of written feedback. In virtual world teaching scenarios often the teacher does not have the traditional teacher role, but rather becomes the organiser/moderator/facilitator of communication among individuals/teams, between individuals/teams or even between individuals/teams and other residents of the virtual world. Permanently correcting the students as soon as they make a mistake wouldn't be appropriate – but listening carefully and giving detailed feedback is a valuable and highly appreciated service.

There are more types of assessment-mechanisms that yield rewards than we think at first glance.

Giving rewards needs prior assessment. We like assessments that are not done by the trainer, but by other people, e.g. expert or peers.

- Peer assessment is a very powerful mechanism, because reputation among the peer-group is an important motivational factor. Peer assessment can be realised directly in Second Life by using voting tools. Other possibilities are Portfolio-systems or forums where contributions can be rated.
- Experts assessment as well is a powerful mechanism, because it adds relevance to the whole course experience. This is especially suitable in CLIL-scenarios (content and language integrated learning).
- Automatic assessment can be easily implemented by using either links to Web 2.0-resources (e.g. quizzes in Moodle) or (preferably) directly in Second Life via a SLOODLE-connection to Moodle (e.g. SLOODLE's quiz chairs).

- Assessment by interaction with objects: Depending on the scenario, one possibility to track successful completion of a task is checking for repository objects. e.g.: in a role-play-situation a student might be given a tea although s/he ordered a coffee.
- Teacher assessment: If no other possibilities exist, then the classical way of assessments – done by teachers – would also be ok :-)

A reward model is a powerful tool for the course designer / educator.

Thinking about reward models drives the attention to

- learning goals
- measurement of achievements in regards of learning goals
- type of students / student's motivation (what are they interested in? what would they motivate best?)

These are exactly the 3 crucial issues when designing a course. Clear learning goals (and their communication) enable the student to decide whether the course meets his or her learning demands. Measuring the student's achievements in regards to the goals is valuable feedback for the student and profoundly contributes to the student's motivation as it draws a map indicating the starting point, the goal and the student's current road and position.

Reward models do not need to be fancy, but they must be considered.

In virtual worlds, distributing rewards is easy and tempting. Nevertheless we must keep in mind, that a reward model must be carefully aligned with the course's characteristics and participant's profile. The reward model needs to make sense in the course's context - and that's where things become more difficult and the course designer's creativity is challenged.

The rewards must be tied to the course's objectives, in other words, students that get a reward should have acquired some of the skills that the course designer had in mind. There is the potential that the dynamics of a course change in an unexpected and undesirable way as soon as the rewards become adapted by the student's community (e.g. students trade rewards amongst each other instead of winning them on their own; students specialise in certain fields, where they get most rewards).

Finally: Don't forget to think about the budget: Rewards might cost money - there must be a budget for it.

A reward model is a powerful tool for the participant.

Learning is sometimes painful.

Especially for working adults with family it's a permanent struggle for time-allocation.

Using a clever course design with rewards in many different respects (never forget the social dimension!) can greatly contribute to a student's successful accomplishment of a course. The more dimensions we can offer, the more there will be something in it for everyone: There are students, that will be motivated by collecting e.g. language items, for others playing a game or working on a task with their team might be more interesting. In any case: a clever reward system will help students achieving their goals.

Examples

For examples how the described ideas were applied in the various courses, please refer to the descriptions of the various courses, especially the „Business English“ course and the „Italian for Beginners“ course.

6. Reward model design recommendations

The experience that we gained during the Avalon-courses with applying reward models clearly showed the potential of reward models – as well as potential problems.

Here is a short summary of what is already mentioned above – focussing on the highlights on what we have learned:

Think about a reward model from the very beginning.

The reward model must be an integral part of the design process of the whole course. By squeezing it in at the end you a lot of its benefits get lost.

Alignment: the reward model must fit into the context; everything artificial is counterproductive; we can't just reuse mechanisms from the online gaming world. The Avalon-team spent a lot of time thinking about developing a group-access model for Avalon-island, which would grant certain permissions to students that successfully finished a course. However, we couldn't find a meaningful context for this. Similar, we couldn't find items that students would be interested in (the 'golden sword'). We thought about setting up a store, where students could purchase items for money that they earned in class, but there wasn't enough evidence that this would result in contributing to our goals in terms of motivation and engagement.

Interface to real world

If you see a chance to include real world issues – use it! From the motivational point of view these are especially strong. The 'fulfilment of a wish' is a nice and simple way to do it.

Don't miss the chance for a big 'final event'

The final class is the ideal opportunity for the teacher to sum up, to point out, to reward; to give the floor to the students and let shine. Give them a final reward. It's what the student takes home (also in his or her memory!): a certificates or a t-shirts doesn't cost you anything and is a nice memory. If you have some budgets, real-life books (or amazon-vouchers) are a nice way to do it.

Make sure the final class is a celebration, a really big event! Invite special guests, experts or celebrities. If your course has a kind of winner, then ideally it would be a jury, and not the course instructor, that would decide who wins.

Award as many students as possible. individually!

Normally a course has a primary goal (e.g. improving fluency and self-confidence in business situations), but beside that, there might be other dimensions, that are important for the success of a course, thus should be rewarded as well. Good examples are social skills (e.g. teamwork), technical skills (mastering the environment) or creativity.

This is a good chance for the instructor to show to students, that you see them as individuals. Why not give a "special award for the best presentation ever given by someone who thought he could never speak in public"

This document is licensed under a Creative Commons Non-Commercial-Share-Alike Licence. For further details see: <http://creativecommons.org/>

?

You can use award-mechanism to recruit people.

If you award participants with promotion to a certain role or membership of a group you can collect people with special skills (e.g. those, who proved to be technical fit and helpful) and offer them participation in later courses (e.g. as tutor). This does not only add to their glory, but might also help them earn real money.

References

Molka-Danielsen J, L. Panichi, M. Deutschmann (2010). Reward Models for Active Language Learning in 3D Virtual Worlds. In: *Information Sciences and Interaction Sciences (ICIS), 2010 3rd International Conference on*