

# Elements of Harry Potter

## Deconstructing an edu-larp

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EDUCATION

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*“I cast upon you the curse of lead!” says the wizard’s apprentice with a touch of triumph. “I counter thee with lithium”, the opponent responds with confidence. The two cloak-clad youngsters then engage in a magic contest, exchanging questions countered by answers, snarled like words of power: “What’s the atomic weight?”, “Which group does it belong to? Is it a subgroup or primary group?” Accompanying the words are dramatic sweeps with wands and protective gestures with spell books. The questions and answers are about the chemical characteristics of the two periodic elements in question.*

The point of this article is to elaborate on game-based teaching methods, as used in Østerskov Efterskole, on the basis of a case study. We will describe a learning game used in lessons in August 2008, then we will explain how it functions in relation to the larger narrative framework of the teaching in that period. Subsequently we will offer a theoretical background and terminology for the praxis. The study also compares

experiences had when applying the above-mentioned learning game to different groups of pupils, one group inside a narrative frame and one outside. The first group is a group of students from Østerskov Efterskole who are on a narratively situated field excursion; the other is an ordinary class in the public school system. In the discussion we will offer our view on how the structure strengthens the learner's concentration and motivation by ensconcing the learner in layers of narrative frames and "Chinese boxes" of game levels.

## The edu-larp school

Østerskov Efterskole, situated in the North of Jutland in Denmark, is the first school in the world to have tried to implement edu-larp as a general teaching method. For further description of the school, see Hyltoft (2008).

Teaching through larp is chaotic, confusing and even messy and a school which takes on edu-larp as a method will have to expect to be challenged on its values, especially regarding order and regularity.

When a class is in session people are generally everywhere – or nowhere to be found. Everyone talks at the same time and at the climax of the day the classroom resembles the pit on the Stock Exchange more than the hallowed halls of education. After completing the first classroom play test of a very early edu-larp, "In the Same Boat", with a class of 6th-graders, and having spent 90 minutes in pandemonium, Mads Lunau, the current principal of Østerskov, remarked: "We have created chaos, and it works". Lunau, Hyltoft and Jakobsen (1991).

The chaos is generated by every single pupil chasing after his or her goal at the same time; goals that are designed to lead to learning. It is not feasible for the pupils to play and larp without generating chaos. Consequently, Østerskov Efterskole is embracing chaos through the more accepted term, "play", in their official one-line value statement: : "It is of value that we are able to play."<sup>1</sup> (Østerskov Efterskole, 2008).

<sup>1</sup> Value statement for Østerskov Efterskole in Danish. The faithful translation of the Danish version does not carry the value of the short almost understated expression into English. For the main stream Danish reader, the first line of the value statement is often seen as quite provocative: "Det er værdifuldt, at vi kan lege". The statement is officially sanctioned by the Ministry of Education.

The observation that chaos is synonymous with learning activity is an important aspect for evaluating the observation from non-larp game tests later on in this article.

## A slice of edu-larp at Østerskov

What we offer you here is a slice of educational gaming from a day at the larp school Østerskov Efterskole in Denmark. It is a science class at Østerskov Efterskole during the theme week *Eastwood School of Wizardry and Witchcraft*, which refers strongly to the Harry Potter universe. But it is a special day. The pupils are on an in-game field excursion to the Ministry of Magic, which in off-game reality means to a conference centre, where VIP's from the Danish Teachers Union and representatives from the Ministry of Education have invited us to “perform” an example of our teaching methods. And the pupils are showing off!

The situation, in the pupils' own words, is a kind of climax for this particular week. It is for them a culmination of a week as wizard apprentices with in-game “lessons” in the fundamental necessities of *ars magica*, i.e. *Grammaticus Britannica* (English), *Configuratum* (math) and *Alchemy* (chemistry). During and between lessons, the edu-larp is spiced with constant rivalry between the four student houses for mastery of the most powerful spells, given out at the end of every day to the most excellent of the houses in that day's trials and lessons. And on an individual level there is rivalry as well, to collect the best grades and thus to expand their spell repertoire and improve their skill to cast them.

### The Alchemy game

The students are wizards' apprentices who are about to learn the basic principles of alchemy and spell components. Before they are unleashed in the laboratory, however, they have to display rudimentary knowledge of the components involved in potion brewing and spell casting – which in

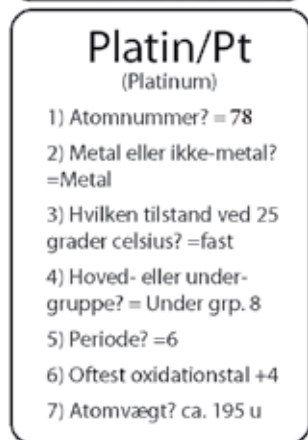
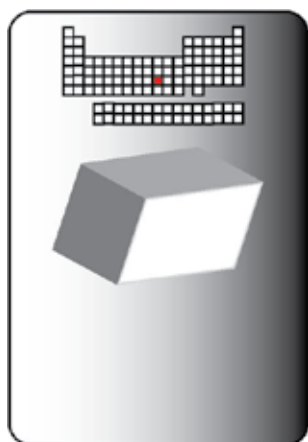
this universe are two aspects of the same thing – but using two different means to deliver the magical effect. The potion can store the magic until needed, delaying the effect, while the spell casting creates an immediate effect. The same understanding can be transferred to chemistry, where reactions might be slow and contained or fast and dramatic. Before allowing the students to play with the real thing, they have to train with proxies of the components (which are the cards) to show their worth. The teacher is in the role of the master alchemist, whose instructions must be followed to the letter! He sets the rules of the training session and controls the transition from one phase to another.

The spectator on the side will observe teenagers dressed up like Harry Potter, flipping, switching and bartering laminated cards for an hour or so. For the in-game apprentices it is a matter of excelling in this class of alchemy, so that they may score experience points to further develop their magical skills with new spells and greater proficiency – an ongoing process lasting the whole week.

The game is designed to teach the basic organising principles of the periodic table of elements, and to train the recognition of periodic elements and their chemical characteristics. The object is to make the system logical and meaningful for the students, so that they may henceforth navigate it more easily – in an exam situation for example.

As a learning objective, the periodic table of elements is actually fitting the game form and the target group quite well for a number of reasons. First of all, the periodic table is governed by stringent rules filled with exceptions – as are board games, card games and pen-and-paper systems. Secondly, the target group is role players, who are already skilled at understanding and navigating complex rule systems. An interesting question to be examined in this article is how The Alchemy game works with a group of pupils lacking this basic understanding.

## Components of the game



- (top) The back of an info card with a grey scale background, which reveals to the observer that this is a metal. The box-shaped figure indicates it is a solid metal and the small red dot in the mini-periodic table shows its location in the table of elements.
- (bottom) The face of an info card with the key information the opponent must figure out to counter the spell.

The physical components of the game are 60 plastic-coated paper cards with various texts and coloured symbols. To effectively activate all pupils, a set is needed for every four – which means a total of 300 cards for an average class of 20. There are two different types of cards: info cards and symbol cards. Obviously, each card has two sides, the back (for all to see) and the face (for the holder to see). The face of each symbol card has printed on it the symbol of a periodic element, but not the element's name, for instance “H” for hydrogen, “He” for helium etc. There is nothing else on the face of the symbol cards. On the back is a background colouring and a symbol. The colouring symbolizes whether the periodic element printed on the other side is a metal or a non-metal (the game disregards the few semi-metals to reduce the complexity). The symbol communicates the phase of the element (solid, fluid or gaseous) at 25 degree Celsius and an atmospheric pressure of 1.

The info cards have similar backs with regards to the background colouring and phase symbol, but differ in one regard, as there is also a printed mini-version of the periodic table, where the place of the corresponding element on the face is marked.

On the card face eight pieces of key information about the element are printed: The name and symbol, whether it is metal or non-metal, the phase of the element, the number of the main or subgroup (in which column in the table it is situated), the number of the period (which row), the most common oxidation number of the element and, finally, the atomic weight in units.

Each periodic element is represented in the game as both a symbol card and an info card, thus there are two decks with the same number of cards – the symbol deck and the info deck.

*Illustration*

Jakob Thomas Holm

## Phase one: the classical memory game with a twist

*A wizard must be able to recognize and remember the different components to be able to use them correctly for the intended purpose (magic is a tricky business and even the smallest mistake can be disastrous!) Phase number one trains the apprentices to this end.*

The master alchemist instructs the apprentices to lay out the two decks clearly separated on a table, but otherwise in a random pattern. Each apprentice then flips the cards in turn, always starting with a symbol card followed by an info card. If they match the correct elements they remove both cards, placing the symbol card in a discard pile and the info card in front of them as a “point scored”. The apprentice continues until he/she fails to match correctly, at which point the cards are flipped back (remaining in the same position) and the turn proceeds to the next apprentice. When all cards have been matched, or when the master alchemist gives the signal, the game moves on to the next phase.

In this first part of the game, it is an advantage to know the general location of the elements in the system, but luck and sheer mnemonic talent goes a long way too. Before even flipping a symbol card, the apprentice has to choose which card to flip on the basis of the information offered by the colourized background (metal/non-metal) and the symbol (solid/fluid/gaseous). The more uncommon the combination of these two elements, the greater the chance to flip the corresponding info card (for example: in all sessions mercury was matched first, along with the other few liquid metals). However, the uncommon combinations are bound to be exhausted rather quickly, at which point knowledge and memory become essential. When the symbol card is flipped, the apprentice may remember the general location in the periodic system of the revealed element, which allows him/her to guess on the basis of the mini-periodic tables on the info cards. At this stage, the status of being metal or non-metal helps guide the “guessing”, since the non-metals are grouped to the far right in the table of elements (with the exception of hydrogen). The memory of previously flipped, unmatched cards may also help the apprentice.

In phase one the basic learning strategy is to facilitate a recognition of the names of the elements, their phases and their metal/non-metal status. The pupils acquire an understanding of the ratio of metals to non-metals and the commonness of different phases, through the visual outlay of cards on the table. They are required to make qualified guesses to score points; as they go, they gradually learn the basic physical and visual characteristics of the elements. Also, they pay great attention to the moves made by the other apprentices, since it is valuable information for them when their own turn arrives.

## Phase two: the battle of wits.

*A good wizard needs to know how to defend himself from hostile magic – quickly and surely. The only way to learn this is through trial and error, again and again...*

When all cards have been removed from the table, pupils arrange their info cards so they can hold them in a fan, as you would normally hold playing cards. They are now free to move around and engage each other at will, in magical contest to win cards from their fellow pupils – each card representing a spell component that may be used to conjure a spell. This is done by posing a challenge, pointing out which card they would like the opponent to use and vice versa. They now ping pong the eight questions on each card back and forth, while trying to find the answers by either decoding the information on the back of the card, by knowing or just by guessing. If any pupil should run out of cards, they may pick one at random from an extra deck held by the teacher. At some point, most of the pupils have figured out how to decode the mini-periodic table and symbols and many battles become ties with no winners. When this stalemate ensues, normally after twenty minutes, the game is taken to the next phase.



■ Two pupils locked in combat...

Photo

Jakob Thomas Holm

## Phase three: combining components in potions

*Mixing good dragon blood with evil dragon blood is an explosive mistake, fairy dust and rose petals make a love potion, but troll's blood rarely mixes well with anything. Recipes and compatibility of components is the next step to learn, when you know the rudimentary of the components themselves.*

The cards with which the pupils end up now have to be combined to “potions”, that is chemicals, in a way defined by the element’s oxidation number. This involves bartering cards between the pupils. At the end of this phase of the game, the pupils then score points on the basis of how many cards they hold, and how many successful “potions” they have put together. Thereby they learn the basic principles of ionic bindings of elements.

## End game : the narrative payoff

At this point the Alchemy class is almost finished, but the end game is still to come. The pupils have scored experience points, which they can now try to multiply with the risk of losing some or all of them. This is done by returning to the spell-casting system that pervades the whole week. They may choose not to engage in this rivalry for magic supremacy, they may opt for conducting organized raids against pupils from other houses, or they may even try to steal experience points from their closest rival within their own house. Only the points awarded for the Alchemy class can be lost or won – not points from previous classes. When the Master Alchemist dismisses the class, the points earned and won may be used to buy new spells or to hone the effects of those already known.

This return to the overall narrative frame, the pupils as apprentices at a school of magic, improving their skill all the time, choosing certain paths of magic lore, is part of the individual pupil’s own narration. So are the enmities and alliances, and the intrigues that they spawn.

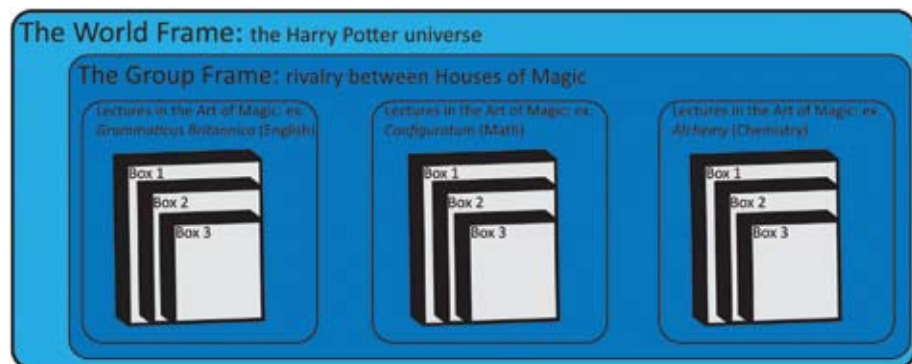
# The frames and boxes

The Alchemy game is designed after what we at Østerskov like to refer to metaphorically as a “Chinese box model” (which refers to the colourful boxes within boxes of Chinese origin) to fit into the frame of the general edu-larp. “Chinese boxes” is synonymous with opening dimension within dimension as the game progresses, in the plot as well as in the learning focus. In a learning perspective this means that the layers of challenges are gradually revealed for the pupils, introducing more and more complex material meant to meet the individual student at their respective levels, each layer building on the foundation of the previous one. In a narrative perspective, it means that the story ideally can be unfolded gradually, and also be limited to a certain time frame, while preserving a momentum in the pupils’ eagerness to explore the game. It is important to distinguish between the term “frame” and what we mean by “Chinese boxes”. The frames refer to the contexts that govern our social interaction as defined by Erving Goffman (1959), which in turn is adapted to a larp context as defined by Lars Konzack (2007). A world frame means all those aspects that define the reality imagined in the game world, from religion to physics. The group frame means the design for the social interaction of the roles.

- An illustration of the structure of the edu-larp: The two outer frames define the larp setting and group dynamics. During the week, different events (or lessons, if you will) take place, composed after the Chinese box-model. There were actually five *lectura ars magica*, but they could not all fit...

*Illustration*

Jakob Thomas Holm



## The World Frame

Building a cosmology of an imaginary world from scratch and making it work is a tremendous effort. Historical facts, political situations, technological states, (meta-)physical realities, philosophy etc. – all of these aspects must be either sufficiently explained or convincingly disregarded for the world to appear coherent. Consequently, most larp designers build on existing genres or works when designing their world frames. They use genres commonly constituted or strongly inspired by movies, tv-series, books, computer games or existing role-playing game worlds (Waade 2006). This remediation is useful since role players to some extent use these genres to establish and negotiate a mutual understanding of the world frame (Holm 2006).

Using a world frame constituted by the Harry Potter books and movies builds on a “willing suspension of disbelief” (Konzack 2007:87) due to the fantastic elements characterizing these imaginary worlds. Although the school’s architecture and interior are a poor substitute for the grand and enchanting halls of Hogwarts, the imaginary world of Harry Potter still holds some advantages. First of all it is known intimately by pupils in pictures and words, so that they know what they are supposed to perceive in-game despite the poor symbolization offered by the physical off-game reality. There might for example be a mutual understanding of what the Ministry of Magic is, making it easier for the teachers to act, although they may take the shape of ordinary-looking teachers watching the pupils (the power of an audience is not to be forgotten, as will be discussed later in this article). Both teachers and pupils know the meaning and authority of this institution thoroughly.

Yet, the Harry Potter world offers several advantages which at the same time are potential drawbacks: the setting is a school and the characters are in student-student and student-teacher relations. The daily rituals of a boarding school, with common meals, lessons and lectures is easily produced, but also dangerously close to a common schoolday reality. Much effort is therefore put into changing the small habits, for instance

the students have to address the teachers and each other differently by title, the tables are arranged differently for meals, the food is as mysterious-looking as possible and the teachers deliver off-game messages in an in-game fashion.

## The Group Frame

What the Harry Potter world does promise is the possibility to work magic. It is the basic premise for the existence of Hogwarts/Eastwood, the very reason for the pupils' presence here, and it is from this capability that all stories emerge and unfold. Magic in larp is also a huge challenge for many obvious reasons – and especially in the Harry Potter world where magic is quite visual in the spectacular sense. Nevertheless, having leather-bound spell books and nicely crafted wands to wave around goes a long way. They become tools to reinvent the bodily language in the imaginary world. The wand can be aggressively gestured with, be arrogantly dismissive or even teasingly sensual.

When resolving the magical effect of the social interaction of spell combat, improvisation cannot stand alone, but must be governed by game mechanics. Otherwise, the spell-casting becomes a meaningless gesture without consequence. We chose to integrate spell-casting in the larp with a pen-and-paper system with dice-rolling, skill level and attributes. In a larp setting this poses some problems, since it introduces a meta level that removes the pupil from the live action element of the larp. On the other hand it solves a major practical problem associated with implementing a challenging system that the pupils can explore, without too many risks for suspicion of cheat and misinterpretation, since it really matters for the pupils that the right person wins or loses in a fair manner. Written rules, and the element of chance that the dice rolling supplies, deliver this.

In practices, every pupil has their spell book, which contains both their personal spells and the attributes needed to cast them. It also contains the rules for spell battles and the rules for further advances in more complicated and powerful spell-casting.

Another element the world frame of the Harry Potter universe promises is the grouping of wizards' apprentices in faculty-resembling houses, with a large degree of rivalry between them. The four houses at the Eastwood School of Wizardry and Witchcraft were further divided into a "younger" and "elder" faction, reflecting the house's 9th graders and 10th graders. In every lesson in magic two rivalling factions from different houses were present to increase the level of competition. At the end of the day, the total experience points scored by each house determined which one was awarded the honour of receiving the powerful spell of the day, which would give that house's pupils an extra advantage when battling for experience points in the lessons the next day.

## A case on the effect on larp-framing in edu-larp

We wanted to see how the actions of dressing up, assuming roles and acting within a narrative frame affected the learning facilitated in this specific case. Or, to put it figuratively: what happens if we remove the two outer frames in the illustration, constituting the whole live action role play aspect, and move the set of Chinese boxes of *Alchemy* to another environment, such as a public school class?

This test was run at Borremose Ungdoms- og Efterskole on January 8<sup>th</sup>, 2009. The school is comparable to Østerskov Efterskole in all respects except for the founding principle being Christianity as opposed to larp.

In order to assure the same level of teacher experience, the test was run by Pernille Roving, a teacher from Østerskov Efterskole, who also participated in the enacting of the Alchemy Game in the earlier instances.

The Alchemy Game has also been run with the group of pupils at Østerskov Efterskole, who did not have the opportunity to participate in the trip to the Ministry of Magic. Notes on the test game at Borremose

Ungdoms- og Efterskole in the forthcoming comparison will apply to both of these games.

## The test game

The test game, which was observed by Malik Hyltoft and had two of the usual teachers of the class as assistants, was met by the pupils with a positive yet cautious attitude.

In the initial stage, cards were laid out on tables and the memory game commenced. Although prompted to stand up around the table (actually the chairs had been stored away), the pupils collected chairs and they all played the game seated. Some, but not all, tried to excuse themselves from participating. Excuses varied – from discarding the game as stupid even before it commenced, to one student claiming that he wanted to use his book instead, now that he for once had remembered to bring it along.

As the game progressed, all pupils eventually joined in for the greater part of the time, but participation and activity level never reached the intensity of the games enacted at Østerskov, where all pupils participated throughout the activity and often created a ruckus.

In the test at Borremose, pupils also lost concentration further on into the game. Already in the challenging phase, two boys started a mock fight over the cards instead of using the intended challenges, and in the end almost one third of the class was not participating in the activities.

An observation (which will call for further analysis at some other point) was that the pupils at Borremose, who were not within a narrative frame, changed the rules of the game on their own accord and were seen cheating in several instances. A significant case was when a boy who had grave difficulties understanding the subject matter “stole” a stack of unused cards from a table and handed them in for his score, eventually winning the game.

In the evaluation after the game, the pupils at Borremose offered very few non-committal opinions, like “nice”, “interesting” and

“different”, whereas the background comments such as “let’s just shut up until they have to let us leave” were far more telling. Group evaluations from Østerskov, in contrast, are usually very long, and everybody wants to have their opinion heard.

In the evaluation conducted with the science teacher of the class, she expressed great satisfaction with the game for its capacity to cover the subject matter and activate the pupils. Although these remarks stand in some contrast to those from the pupils, they can possibly reflect the general mood in the class.

It is necessary to point out that while differences between the implementation of the game at Østerskov and Borremose may indicate a positive effect of using frames and boxes to encapsulate the subject matter of the teaching, they may also simply reveal a difference in the pupils’ opinion about school activities in general. They do not, however, indicate a difference in the academic level of the pupils. In this respect, the two groups are evenly matched. If there was indeed a difference in the opinion of the pupils regarding school activities in general, it still remains to gauge whether this difference stems from a higher level of motivation obtained by presenting teaching as larps rather than regular lessons.

At the time of writing it is our contention, however, to conclude that much of the difference can be ascribed respectively to the presence and absence of the narrative frame.

## The effect of narrative frames and the “Chinese boxes”

One of the most important goals of didactic planning is to keep the learner active, participating in the activities that prompt learning. This is not just important because of the obvious purpose of having the learner acquire the subject matter, but also because inactivity and lack of participation leaves the learner (or, as it often happens, the teacher) with the task of reactivating and joining the learning process again. This effort can be quite hard and does not always prove fruitful. Once the learner is outside

the activity, he/she is in conflict with the educational micro-system, and quite possibly alienated from it.

Through the use of frames and “Chinese boxes”, the learner is effectively goaded deep into the complex of the educational micro-system. Every frame or box is a virtual wall, keeping the learner within as soon as the box is entered.

Let us imagine that a pupil, for some reason, loses interest during the second part (box) of Alchemy and needs to restart. He/she will still be holding cards in their hands from the playing of the first box, thus keeping them in touch with the overall process and tempting other pupils to challenge them and try to force them into activity again. Should this not suffice, they will still be participating in a competition with the other houses for merits or demerits, giving their friends yet another reason to try and coax them into participating again. That failing as well, the teacher still has a chance to address a dissatisfied apprentice wizard before he/she turns into a disenchanting young teenager. In other words: Every time a pupil enters the narrative frame of the larp or opens another box in the game and goes in one level further, it becomes more likely that he/she will maintain focus long enough to benefit from the activity.

Pupils in test games at other schools still experienced the activation effect of being in a game, but when this nevertheless failed to keep them active, they were sometimes separated from the teaching activity. At Østerskov Efterskole this is a quite seldom occurrence, and during the Alchemy Game it was not detected at all. It is impossible to ascribe this difference for sure to the use of narrative frames at Østerskov Efterskole. Other possible reasons could be lack of teacher authority or disillusionment with the general school situation; but in both these cases – which have seldom occurred at Østerskov – one could argue that teaching method, mood and mode still account for the higher level of morale.

Using games and narrative frames to keep learners inside the learning activity is not foolproof; but it does make it a lot harder to quit than just putting down your pencil.

# References

- Goffman, Erving** (1959): *The Presentation of Self in Everyday Life*. Doubleday: Garden City, New York, 1959.
- Holm, Jakob Thomas** (2006): *Kommunikation med genre i levende rollespil*. Master Thesis from Department of Media Science, Århus Universitet.
- Konzack, Lars** (2007): Larp Experience Design. In Jesper Donnis, Morten Gade and Line Thorup, *Lifelike*, Knudepunkt.
- Hyltoft, Malik** (2008): The Role-players' School: Østerskov Efterskole. Markus Montola and Jaakko Stenros, *Playground Worlds*, Solmukohta.
- Waade, Anne Marit** (2006): Jeg – en aktion helt! In *Rollespil*, Anne Marit Waade and Kjetil Sandvik, Aarhus UniPresse.

# Ludography

- Lunau, Mads, Hyltoft, Malik & Jakobsen, Troels (1991): **I Samme Båd**, FN-Forbundet.
- Holm, Jakob Thomas & Roving, Pernille (2008): **The Alchemy Game**, Østerskov Efterskole.