**Analysis**

**Situation**

There are students who falls behind with their physics due to absence and underachieving. So far we have had to hold afternoon classes, but would like to replace it with an elearning material.

**People concerned**

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| Issue | Answer | Outcome of the answer |
| Goal of the school | Good marks  To make up for what ones have missed  Extra help for underachieving students | Learning outcomes are the same as in the Lesson plans |
| Present skills and understanding of the students | Avegare, little variation | For differentiation it is enough to make two versions |
| People concerned | * Students * Parents * Me * Other teachers * System administrator | * We have to ask the opinion of the parents about the idea * Do the students have a proper technology at home? * What about the students’ ICT skills? * Can the parents help their children with using the software? |

**Learning Challenge**

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| **Issue** | **Answer** | **Outcome of the answer** |
| What is the challenge? | Learning difficulty  Absence  No time to practice the problem solving in the lesson | Problems step-by-step  Opportunity to practice the problem solving |
| Why elearning? What are the pros? | If the method works out, everyone can study at home, at his or her pace |  |
| What are the goals, objectives and expected results? | Helping the absent and underachieving students to catch up | We need asynchronous learning format, which can complete the class lessons, moreover it can replace them. |
| What negative responses do we get from the students? (e.g. discipline, lack of motivation, truancy) | Absence and underachieving | They should at home the same whta we do in the class. The learning outcomes are the same |
| What should they do better? | To work more effectively, to join the lesson. | We have to learn if they are willing to complete their studies with elearning Lessons.  To learn the level of motivation with a „before” attitude questionnaire. |
| What are the students' needs and expectations? | Good marks  Interesting learning material  A lot of activities | They need various and a lot activities, stories, interactive and multimedia elements to raise their interest |
| What are the students' skills, talents, strengths and weaknesses? | They have the sufficinet prior knowledge  There is some variation in ICT skills  There are students who are proficient in handling computer games | To build the elarning material in an easy-to understand and follow way |
| What kind of support have they got so far? | Tho students have tutor | The learning material has to meet the conditions of tuition |
| What changes could the students make to improve? | They can join in the class lessons  Better marks | Improving problem solving skills  Improving motivation |
| Is there any opportunity to put the theory into practice? | The same problems and experiment are covered in the learning materials and in the lessons, but the students can’t carry out the experiments at home. | Various, open-ended problems  Simulations for the experiment so that the students at home can follow  them step-by step.  To start the theory with a simulation and to build the theory on it.  Word problem solving |
| What learning difficulties and disabilities occur? (dyslexia, short-sightedness, etc.) | There are two hyperactive students | Continuous feedback is needed through problem solving  A lot of interactive simulation to make them busy |
| What are the consequences of failure? | Then we get stuck in the material and can’t finish the theme. The test fails. | More tuition in afternons |
| Ask the students about the proposed curriculum, consult with them, learn their expectations. | They are enthusiastic, though I don’t think they know what’s that till they will try it. I suppose they expect a computer game | Little text and a lot of interaction are needed, similar to computer games |
| Is this is the method you need? Is there any other way to solve the problem? | Could it be tuition in the afternoons | It is difficult to organize the tuition, it is stressful for both teachers ans students |
| Is there any risk? How can we reduce it? (Risk assessment) |  | See Risk assessment |
| What are the benefits which make the project worth-while? | Development in every field | Affective, because elearning is attractive due to interactivity  Cognitive, because we deliver new information  Skill development, because the students will solve problems. |

**The learning material**

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| **Issue** | **Answer** | **Outcome of the answer** |
| The learning material | The schoolbook and the curriculum is given | It is not worth repeating the schoolbook text in the elearning material, but we can refer to it.  The screen is not for reading lengthy texts, anyway. |
| Resources available | The ppt presentation displayed in the lessons  Worksheets  Simulations  Lesson plans  Sulinet SDT website  University of Colorado website (phet.colorado.edu) | They can be used for creating the learning elements |
| Development needed | Making the storyboard based on the available elements | We have to find out the the order and the structure of the material |
| How will we assess and document the outcome? | Through homework and short tests | The problem solving can be put into test, while the word problems are handed in as essays |

**Technology**

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| **Issue** | **Answer** | **Outcome of the answer** |
| Learning environment | The students can use a computer in the school library | We have to ask the parents about the computers available at home: performance and software  We have to know the opening time of the library |
| Resources | All the important software are available | To consult with the system administrator about it |
| Obstacles | In the Risk assessment |  |
| Timeline | It is continous: development and implementation takes place paralel, following the curriculum and schedule | We have to finish the project by the lesson is due, otherwise we have to wait for a whole year to use it |
| Budget | The school can’t contribute | We can look for tenders or other kind of competitions |
| Software, hardware, Technology | We should use Moodle, as there is one on teh server of the school  Or we can pack everything in one single flash by lessons, and to upload them to the school website | In this case we have to teach the students the use of the Moodle  In this case we can’t follow the students’ accomplisment. |

**Risk assessment**

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| **Obstacle** | **Solution** |
| Lack of ICT skills | Holding a demonstration about Moodle; opportunity to practice |
| Lack of motivation | Playful learning material with attratctive design and interaction. To present a part in lesson and using the cliffhanger method. |
| Several students don’t have access to computer | They can use computers in the library |
| They can’t get help if they get stuck. | The material has to be very detailed and sponnfeeding, with a lot of supplement, using step by step method. |

**Forms**

1. Initial attitude questionnaire for the students

2. Questionnaire for the parents:

* + Whether a computer aided learning environment is available at home (computer, internet, sotware)
  + Whether a peaceful learning environment is avaliable (the student can spent an hout in peace and quiet)
  + Whether the student can get any help with using software and with the subject
  + Whether the parents have any objection against introducing the elearning method