

# Why should we bore students when teaching CS?

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## Abstract

Motivating students is extremely important. This poster is about pursuing the use of humour, or at least real-life related examples, on assignments in CS courses. We conducted the wild experiment of disguising a boring assignment description as a humorous pirate story. The outcome was surprisingly positive. This sort of approach can have a direct and positive effect on the dropout rate of the course, so it is worth trying.

## 1 Motivation for Motivation

The skills that students are supposed to learn while doing their programming assignments are complex and multiple. This leads to long and boring assignment descriptions that are not interesting enough to inspire careful reading. Thus the students find the whole assignment unmotivating and also pose questions that are already answered in the assignment description. This certainly does not help with the high dropout rates in programming courses.

Our discipline is suffering from a loss of applicants (Curzon 2007), though the employment rates are staying high (at least in Finland). This indicates that the field has become unattractive to some extent (Klawe 2005). If the assignment descriptions in the first-year courses are all complex, boring, or involving mathematical formulas, the students do not relate our teaching to the ongoing high-drive ICT hype (Web 2.0 etc). So the problem can be to some (rather tiny) extent generalized to be a matter of the attractiveness of the whole discipline: are we boring or not?

## 2 The Course Atmosphere

Our approach to maintaining the students' interest and motivation towards the course is to create a unique and friendly atmosphere in the course. This does not simply mean being friendly and smiling when lecturing. It requires the atmosphere to be integrated to the whole course as many students do not attend lectures, and the most demanding part of the course is what is to be done at home – the assignments. Those are the parts that need to reflect the attitude of the instructors instead of demotivating the student. That is why we suggest making the assignment descriptions motivating and fun.

The actual core of the assignment can be designed to match its pedagogical purpose, but our point is

how it is presented. Plain percentage calculation might be a thriller for a scientist, but calculating your mid-term party punch alcohol percentages could be more interesting for a student. The idea is not only to show something of a real-life example but to actively use humour. Matocha et al. (1998) have named this sort of unorthodox teaching method *extended analogy*. A similar approach with the same underlying principles is used effectively by Dr. Paul Curzon in doing CS outreach for kids (Curzon 2007).

## 3 A Part of Naval War-history – A Case Study in TUT

The introductory programming course in Tampere University of Technology includes a relatively large programming assignment which has been a demotivator for most of the students. To fight the boredom and the huge dropout rate we decided to disguise our well designed learning objectives which ultimately entailed a long assignment description. The actual assignment was to implement a simple text-based version of the classic Battleship game; this was hardly boring, but not exactly hilarious either.

In a short meeting we decided to come up with a frame story. We wrote an introductory chapter full of rubbish to the assignment description. Following quite closely the plot of the blockbuster film 'Pirates of the Caribbean – Dead Man's Chest' by Depp et al. (Verbinski 2006) we turned our Battleship game into 'Pirates of Kaukajärvi<sup>1</sup> – (Ph)Doctor Man's Chest'. The example execution printouts in the assignment description were also turned humorous, resulting in quite a package.

Besides disguising the assignment description, the course staff, a subset of the authors<sup>2</sup>, decided to stick their necks out when presenting the description to the students in the lecture. The result was a one-hour spectacle of two pirates lecturing about the programming project, with numerous laughs (see Figure 1).

The experiment had no ambitious goals, besides amusing the lecturers themselves, so in collecting feedback from the assignment in general, as we always do, we were overwhelmed by the amount of extra positive feedback relating to the frame story – and we had not even asked students explicitly to comment on that. Indeed, we received not a single negative comment related to the frame story. Here are some extracts from the student feedback:

*"It's nice that school doesn't always have to be too formal and unhumorous. Despite the actual programming would be as boring as always it's cheering that the subject is nice."*

<sup>1</sup>Kaukajärvi is a lake near our university.

<sup>2</sup>Keeko is not a teacher, but an imaginary polar adventurer presenting here a meta-example of the subject.



Figure 1: Sticking one's neck out for an educational purpose

*"The subject of the assignment was BRILLIANT! The subject was the biggest reason I kept motivated even during the most laborious moments."*

*"A student in another university gave me bitter feedback on how they can never do anything this nice but always have to be so serious."*

*"The introduction in the assignment description gave me the best laughs in the semester, thank you!"*

#### 4 Discussion

Disguising assignment descriptions with hilarious details or relating them to real-life examples does not require too much additional work. However, the outcome can be extremely positive as students feel a unique course atmosphere. The use of comedy is a huge aid in creating the atmosphere; but of course it is not natural for all instructors and should not be forced. Real-life related, non-humorous examples and assignments are still more motivating than purely theoretical ones.

An additional benefit of using humour is showing the students that despite his/her additional knowledge, the lecturer is still a human being and can be approached for conversation and questions. The freshmen especially tend to find the status of a lecturer so frightening that they might not ask for help even when they really need it. This could already be helpful in decreasing the dropout rate.

In some cultures, however, and in lower levels of school, it can be really important for the lecturer to maintain the status of ultimate authority, so there can be some sort of moral conflict between maintaining the authority and trying to be approachable, especially through the use of humour.

Our experience shows that the broad use of humour and well designed real-life related examples and assignments throughout the course has created a suc-

cessful course atmosphere where the students dare to talk not only with the teaching assistants but also in the lectures (in a positive way). The students liked the course atmosphere, and even the instructors enjoyed their work much more.

#### 5 Acknowledgments

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