

Why Students Drop Out CS1 Course?

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Contents

1. Research questions and their background
2. Target course & Procedure
3. Results
4. Conclusion
5. The next step

1. Research Questions

1. Why do students decide to drop the CS1 course?
2. How do drop out reasons cumulate?

What does literacy say about drop out reasons and issues that predict success?

Motivation

Stress

Personal problems

Professional commitments

Comfort level

Attitude

Self-esteem

Academic performance

Financial hardship

Expectations

Social and academic needs

Some other issues that might affect drop out/stay decision:

- Difference between high school and university
- Cultural issues
 - Entering university
 - Financial factors
 - No consequence for dropping out the course

2. Target course & Procedure

CS1 as a target course

- 5 study weeks (8 ECTS units)/ 200 hours
- 10 exercise rounds, programming project, exam

Procedure:

- Questionnaire
- Interview

3. Results

1. No time

- The student decided to prefer doing something else
- The student had not booked enough time for the course
- Course was more difficult than expected -
→ course required more time

2. No motivation

- No study motivation in general
- Payoff is imbalanced

Student: Well, sometimes it was like that I asked [the tutor] many times and it [programming exercise] got just a little bit further. And then it took several hours of work and two, three visits at the programming exercise group that I was able to finish one programming exercise. In addition, I had been thinking about it by my self. I felt so frustrated that I spend almost ten hours to the program that counts the mean of three numbers. There is no creative thinking there. It is just fighting that you get the program to work. (12:56)

- Too difficult
 - cannot find errors
 - managing extensive unity

- not enough information/ability

Student: It was so laborious to do the programming project considering the knowledge that had been given so far. There remained a lot of rustling up to do. I know how I could have managed to do the project but since it was not absolutely essential for me to do it (3:90)

Interviewer: Was the laboriousness of the project the crucial thing here? (3:91)

Student: No, not the laboriousness but the lack of knowledge. My subject was a family tree and it proved to be pretty hard to do those branches... (3:92)

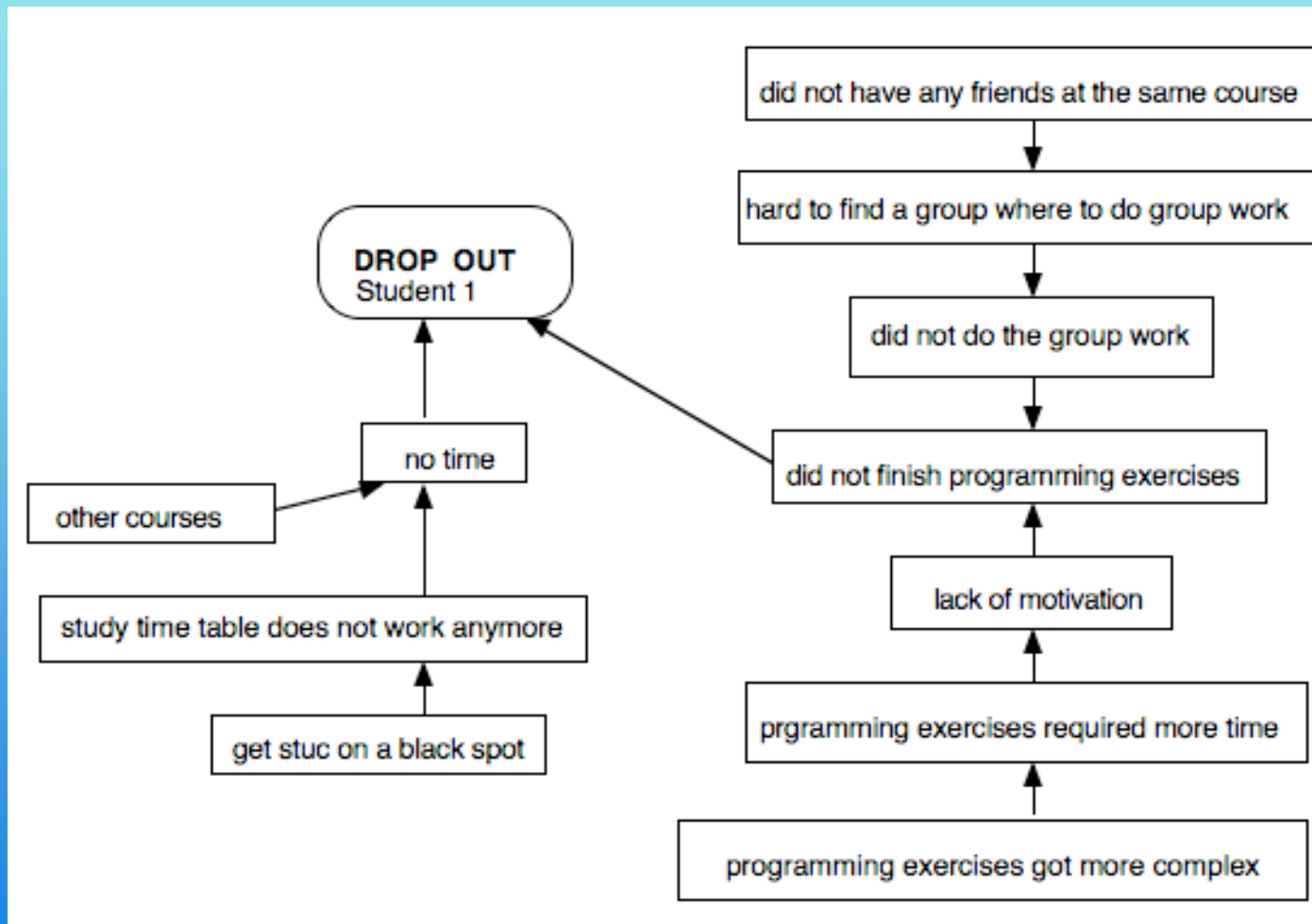
- Other reasons
 - plagiarism
 - good enough grade was not likely
 - comfort level was low

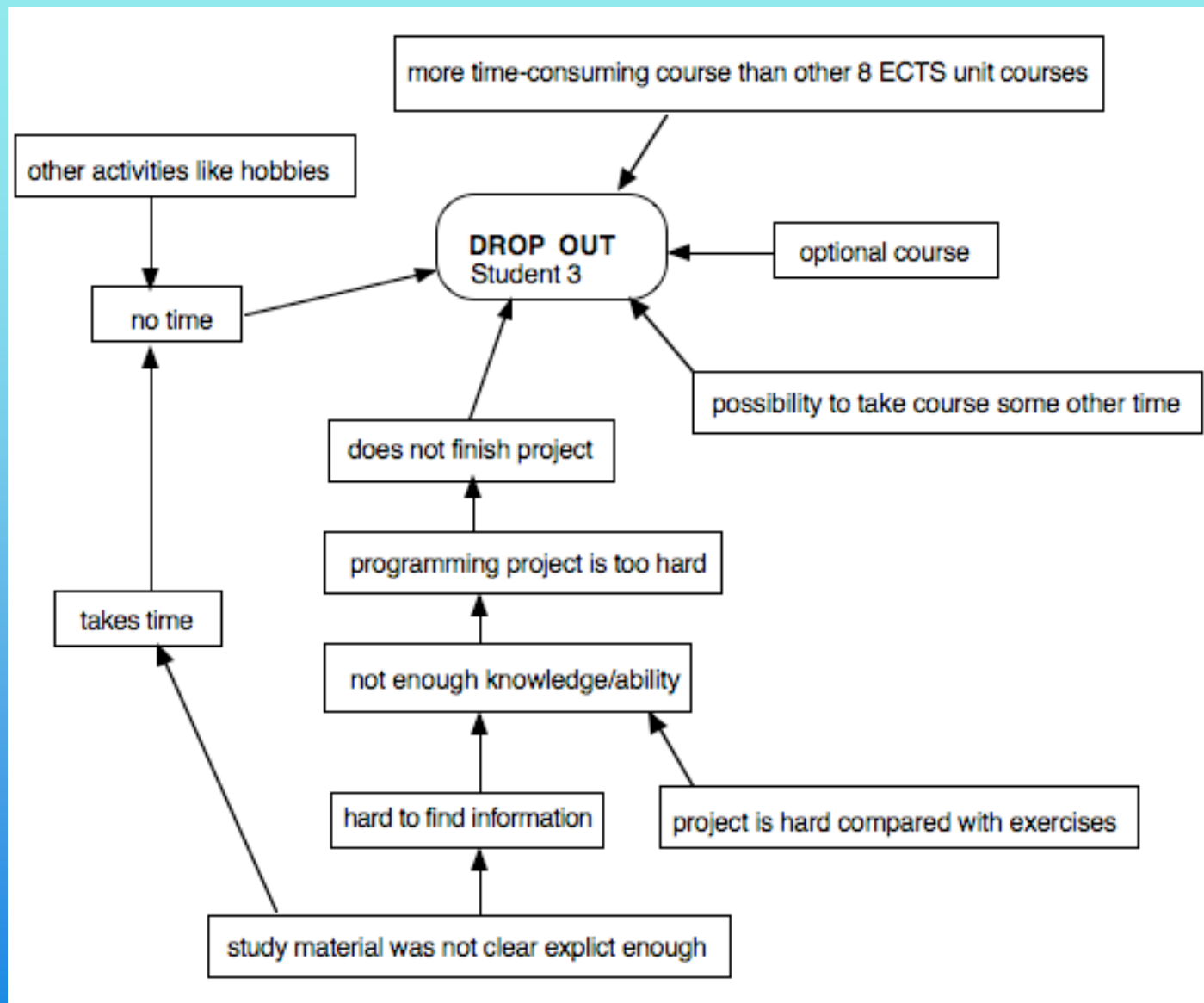
Summing up results

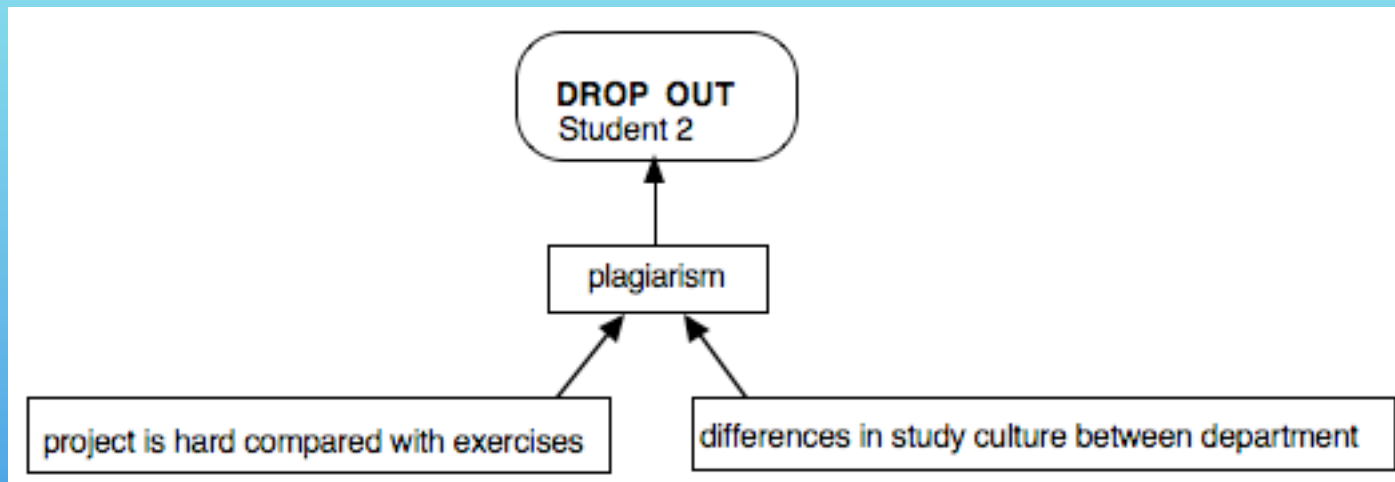
- There are various drop out reasons
- Reasons tend to cumulate

And they cumulate individually

Cumulative feature of drop out reasons







4. Conclusion

- Since there are various drop out reasons there is no one magic solution for it.
- In order to reduce the drop out rate interventions are needed in more than one of following issues:
 - institution level actions:
 - study counseling that includes studying and time management skills for students
 - better coordination of model program courses
 - course level actions:
 - support and education for teachers and tutors
 - supporting social interaction among students

5. The next step

- Questionnaire to larger amount of students to find out:
 - the most material drop out reasons
 - the marginal drop out reasons
- Planning, implementing and evaluation of an intervention

Thank you!