



# Dropout model

Küllli Kori

# Dropout model

- Factors that influence dropout based on literature (dropout in higher education level – not only ICT)
- Dropout model based on literature
- What can be added to the model based on our study?

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# What influences dropout?

## 1) Demographics

- Gender
  - male students have higher probability of dropping out (Belloc et al., 2011)
- Age
  - older men have higher probability to drop out than younger men, while age is not important in women dropout (Stratton et al., 2008)
- Nationality
  - foreign students have lower probability of dropping out than local students (Belloc et al., 2011)
- Place of residence
  - students who resident in the same city the school locates are more likely to drop out and change the field of studies within the same institution (Belloc et al., 2011)

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# 1) Demographics

- Marital status
  - married men are more likely to stop out from studies for short period than men who are not married, but the probability of dropping out is smaller than stopping out for a short period (Stratton et al., 2008)
  - married women are also more likely to stop out for short period, but not significantly more likely to stop out than to drop out (Stratton et al., 2008)
- Parental status
  - woman with young children are more likely to drop out than to stop out and men with young children have lower probability of dropping out (Stratton et al., 2008)

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# What influences dropout?

## 2) Students' income

- Household income
  - students with high income are less likely to drop out. However, students with very high income may be less motivated to finish studies (Belloc et al. 2011)
- Financial aids
  - financial aids can lower dropout risk (Chen, 2012)
  - students who receive aids or grants have the lowest probability of dropping out and dropout probability is higher for those receiving loans (Stratton et al., 2008)

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# 2) Students' income

- Parents income
  - parents' income often influences students' income and this way dropout (Chen, 2012)
- Working during studies
  - working students have higher probability of dropping out (Taylor et al., 2012)
  - the more hours' student work, the higher the probability of dropping out is (Polidano & Zakirova, 2011)
- Employer
  - employer is an adult figure for young people's life and his/her endorsement of school persistence can have a significant impact on students (Taylor et al. 2012)

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# What influences dropout?

## 3) Psychological factors

- Satisfaction
  - the more satisfied student is the less likely he/she will drop out (Duque et al., 2013; Duque, 2014)
- Stress
  - stress in their college environment influence dropout (Johnson et al., 2014)
- Emotional exhaustion
  - emotional exhaustion which is a part of burnout syndrome and could influence dropout (Duque et al., 2013; Duque, 2014)

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# 3) Psychological factors

- Performance in the university
  - students with a lower performance (GPA and collected credit points) have a higher probability to dropout from the university (Belloc et al., 2011; Stratton et al., 2008)
  - college GPA is the biggest dropout predictor (Chen, 2012)
- Prior studies
  - if students get higher marks in high school then the probability of dropping out is smaller (Belloc et al., 2011)
- Working during studies
  - high workload leaves less time for studies and this influences academic achievement (Darolia, 2014)



# 3) Psychological factors

- Motivation
  - higher motivation results in higher academic achievement (Bruinsma, 2004)
  - higher motivation can lower dropout rates (Gottfried, 2009)
  - students with lack of motivation have higher probability of dropping out (Vallerand and Bissonnette, 1992)
- Perceived quality of education
- Expectations

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# 3) Psychological factors

- Social integration
  - student involvement
    - includes energy devoted to studies, time spent on campus, active participation in student organizations, interaction with faculty members and other students (Duque, 2014)
  - relations with other students and institution
    - students with a higher level of academic or social integration have a lower risk to dropout (Chen, 2012)
  - campus environment
    - college environment could cause stress and therefore it influences dropout (Johnson et al., 2014)

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# What influences dropout?

## 4) Institutional characteristics

- Students' demographics
  - the students who dropped out were more likely from institutions with a higher percentage of minority students (Chen, 2012)
- Structure
  - students who dropped out tend to come from public institutions and low-selectivity institutions (Chen, 2012)
- Faculty
  - the students who dropped out were more likely from institutions with a lower full-time faculty–student ratio, a smaller number of full-time students (Chen, 2012)
- Finances
  - students in institutions with a higher level of expenditure on student services had lower probability of dropping out (Chen, 2012)

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# What influences dropout?

## 5) Year of studies

- Dropout rate is the highest in first year and is smaller in later years (Chen, 2012)

## 6) When started university studies

- Students who enter the university immediately after high school are less likely to drop out (Stratton et al., 2008)

## 7) Educational plan

- plans above a Bachelor's degree are associated with a lower probability of dropout (Chen, 2012)

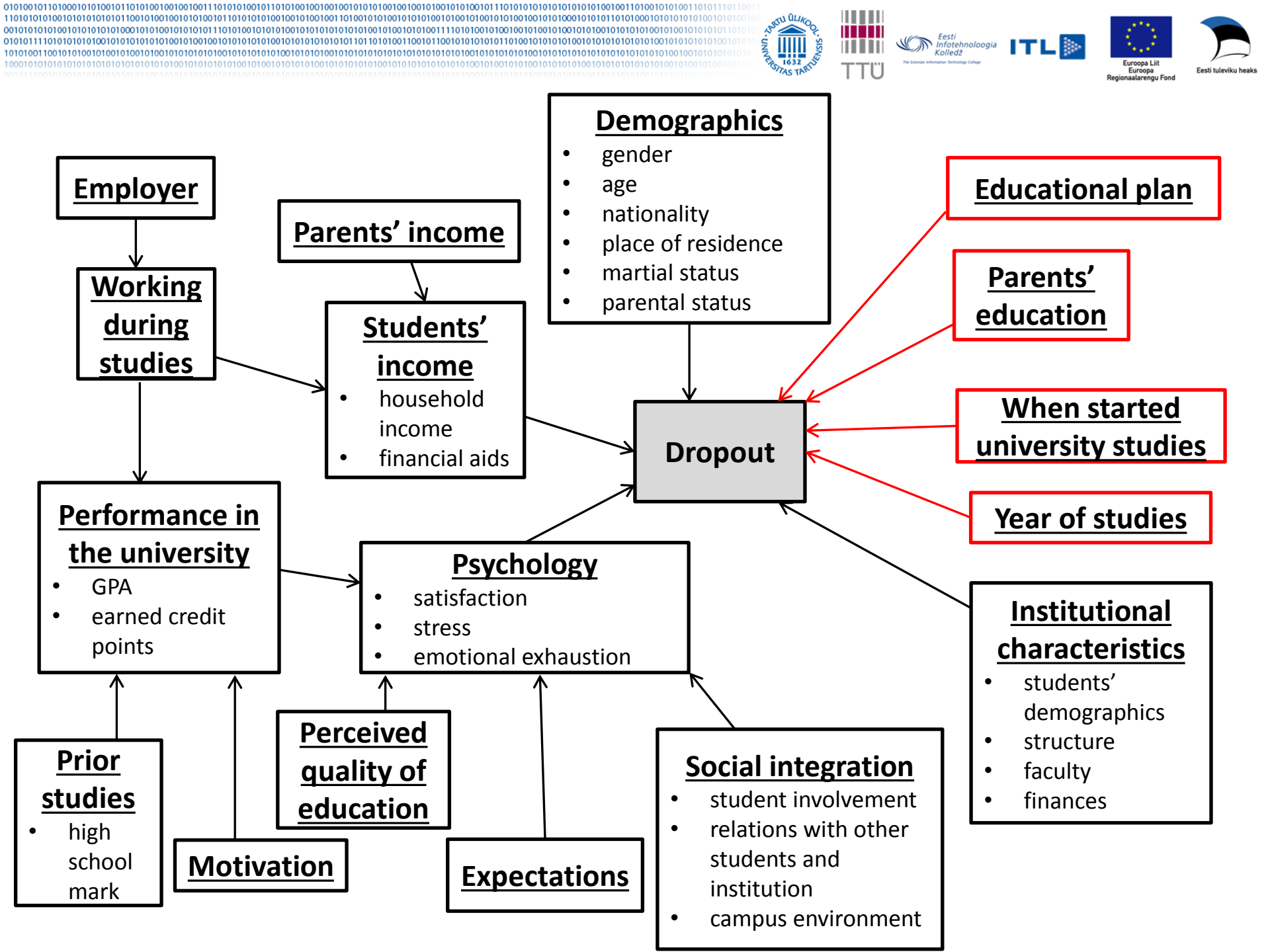
## 8) Parents education

- if parents have higher education degree then their children are less likely to drop out (Stratton et al., 2008)

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# Based on our study

- Students who had lower results in the state mathematics exam were more likely to drop out during the first year ( $p < 0.01$ ).
- Students who had learned programming before entering the university had higher average grade ( $p < 0.01$ ), influencing students' satisfaction with their studies.

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# How to continue?

- Search for more models
- What can be added to the model based on our study?
- Which factors influence dropout more and which less?
- How universities can use their resources to avoid dropout?

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# Thank you!

