

# Projet “Complex Trajectories”

<https://web.fe.up.pt/~complext/pages/about.html>

GTES, Dijon le 22/06/2023

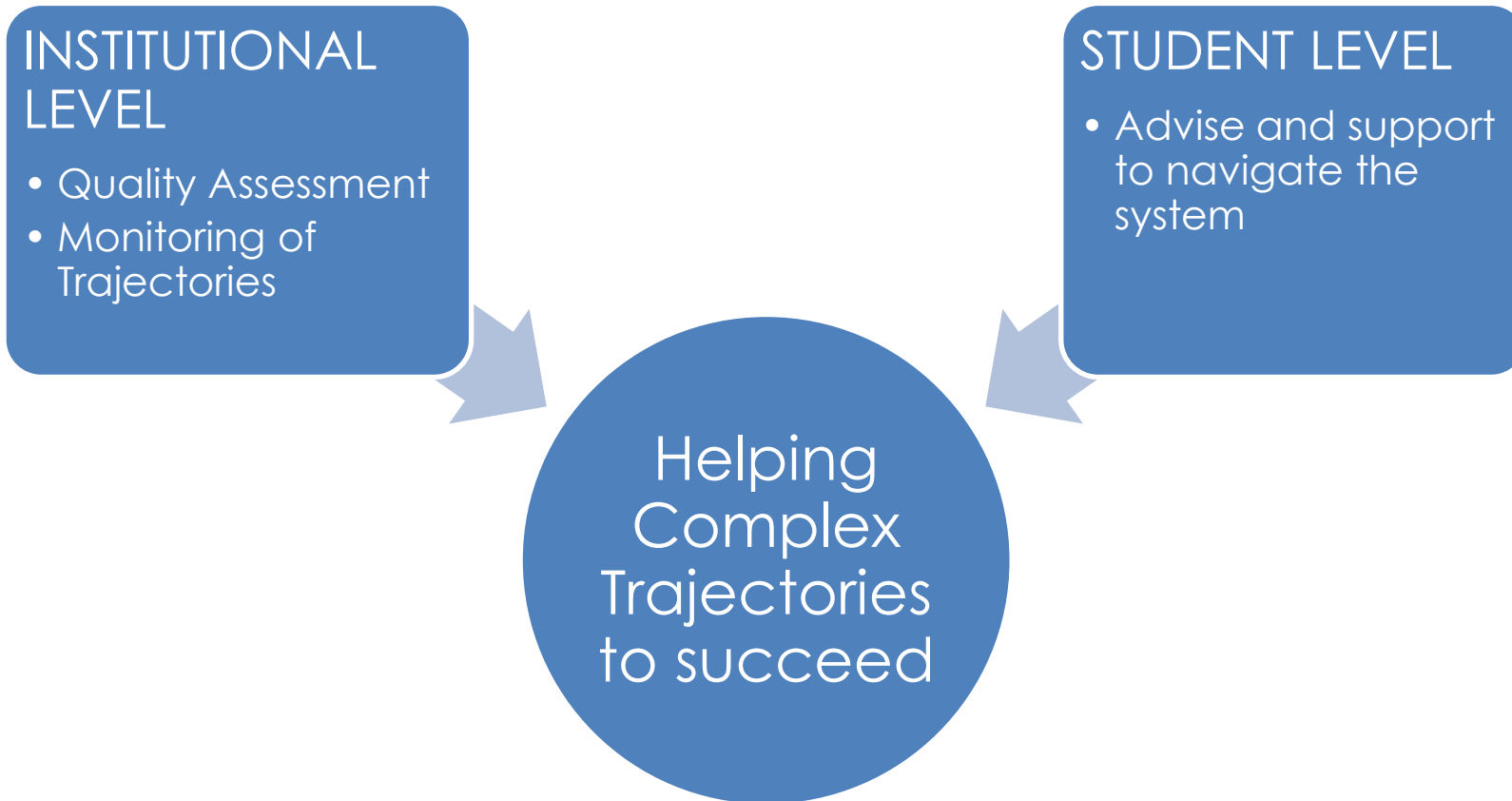
Présentation : Jean-François Giret (IREDU, UB) et Helena Troiano (GRET-UAB)

Consortium members:

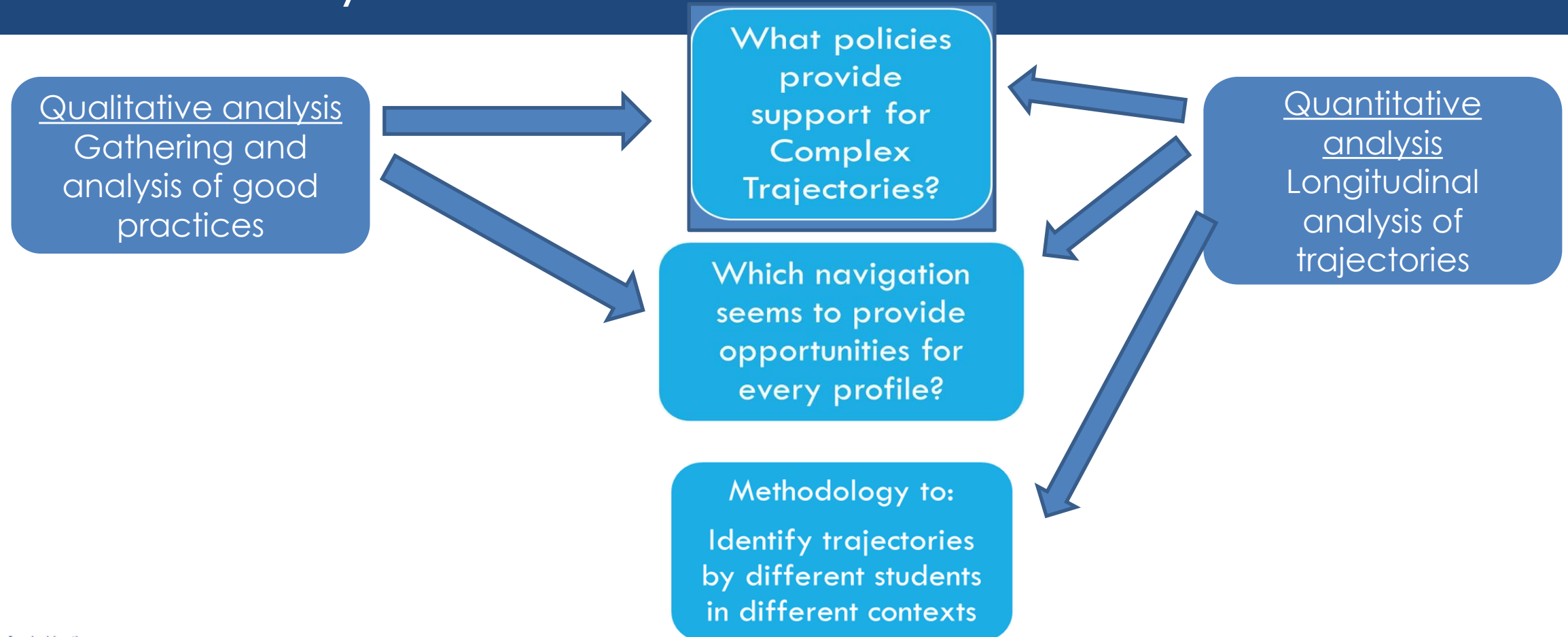


Les partenaires

# AIMS



# The analysis



**Unit 1 Data**

- Introduction: Big Data in today's society. The utility of Big Data for policy makers, especially in university contexts.
- Analysis strategy in a sea of data: Cohort/Promotion of access, variables, longitudinal. How to ask for data to the data registry administrators.
- How to organise data for the posterior longitudinal analysis.

**Unit 2 Different methodologies for longitudinal analysis**

- Overview (Janine's presentation).
- Sequence Analysis (Janine's presentation).
- Pathways model (Chris' presentation).
- Educational Data Mining (Vera's presentation).
- Group Based Trajectory Modelling (Janine's presentation).

**Unit 3. Sequence Analysis**

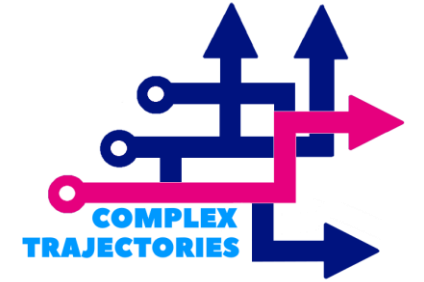
- Preparing the data for SA (Albert's presentation 4/11/21).
- Instructions for visualising trajectories.
- Instructions for constructing trajectory indicators.

**Unit 4. Group Based Trajectory Modelling**

- Preparing the data for GBTM.
- Instructions for executing GBTM.
- Instructions for Multitrajectory results.

**Unit 5. The construction of synthetic indicators**

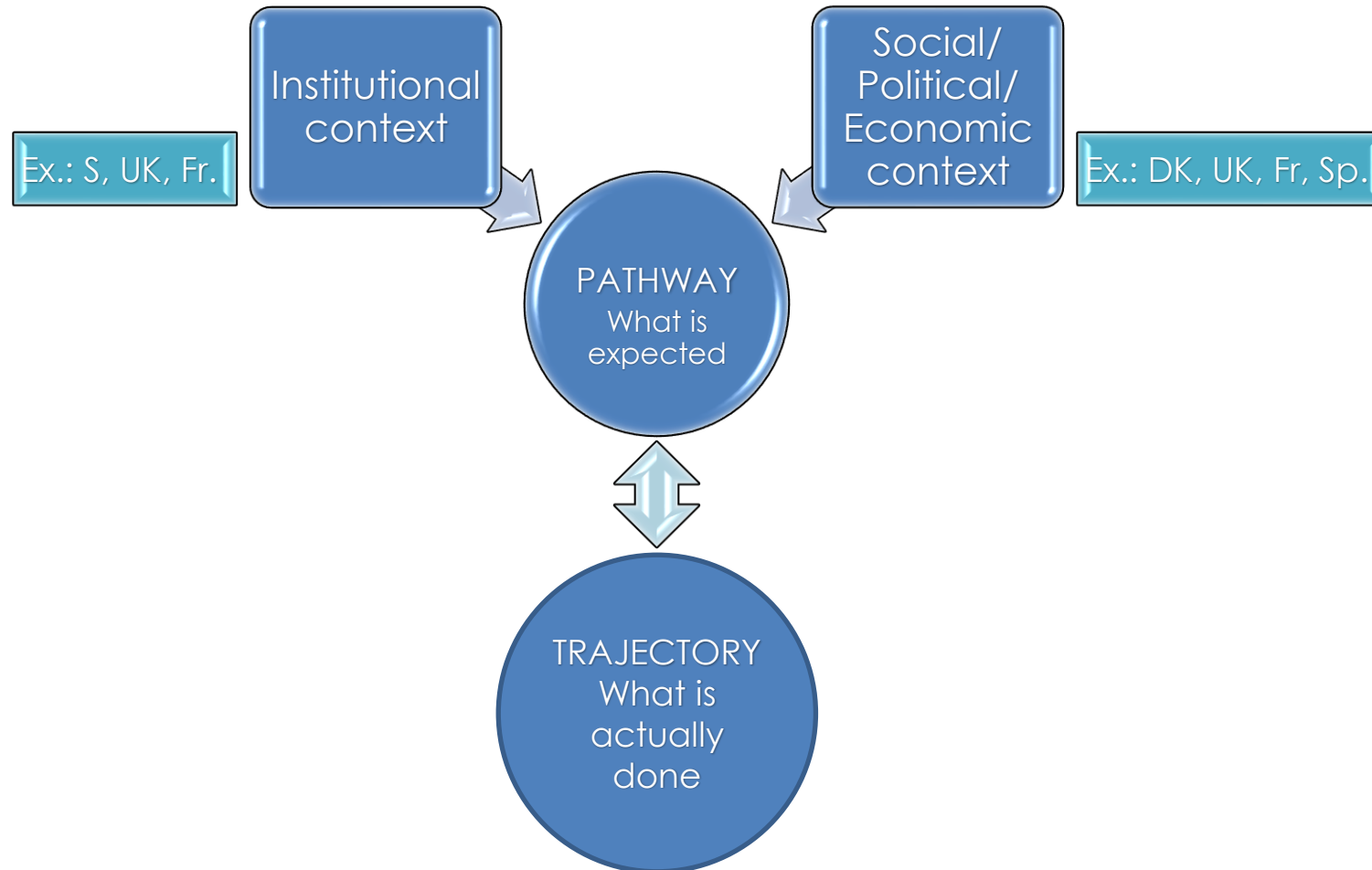
- Instructions for constructing basic indicators from SA.
- Instructions for constructing a typology.
- Instructions for constructing final states.



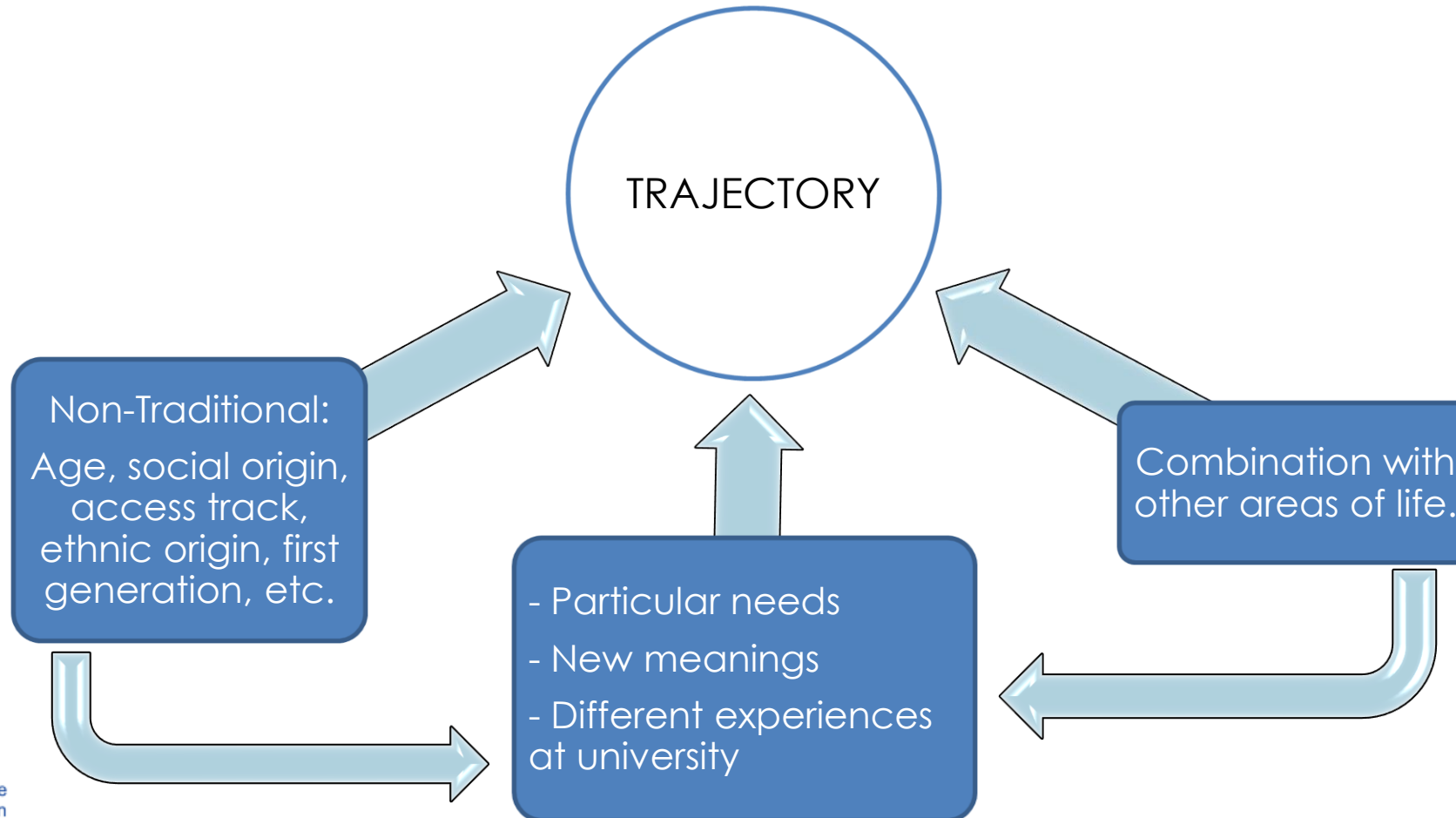
# Sequence Analysis of Complex Trajectories

Comparative report presentation

# Conceptual approach to trajectory



# Trajectories diversification





# Complex Trajectory includes...



## Drop-out:

- After 1 year enrolled.
- Later on.



## Change of:

- Degree, with or without change of field of knowledge.
- Institution of higher Education (inside/outside Universities).
- Modality: online to onsite, or vice versa.



## Delay



The trajectory comes defined with what happens while the student is still enrolled, whereas we consider a different thing the "result" state at the end of the period observe

# Approaching trajectories: what data?

- ▣ Longitudinal. Necessary data structure to track people over time.
- ▣ 2012 cohort. Cohort needed for all European Higher Education Area degrees to be in place and well-established.
- ▣ 2012-2019. 7 years to give time to observe complex trajectories, specially in online modality.
- ▣ System data. It is better to have system data because students are interested in their “persistence”, not retention (Tinto, 2017).

# Approaching trajectories: data from whom?

- ▣ Catalan System:
  - ▣ Onsite modality (11 universities).
  - ▣ Online modality (1 university).
- ▣ University of Valencia.
- ▣ University of Porto.
- ▣ University of Burgundy (some degrees online).

	Bachelor duration
Catalan on-site	4 years (240 ECTS). Exceptions of 5-6 years.
Catalan on-line	
University Valencia	
University Porto	3-4 years (180-240 ECTS). Exceptions of 5y. 5y BA+MA integrated.
University Bourgogne	3 years (180 ECTS). Exceptions of 5y.

	Bachelor duration	Approx. BA price for 60 cr.
Catalan on-site	4 years (240 ECTS). Exceptions of 5-6 years.	1300 – 1800 €
Catalan on-line		2000 – 2200 € (but 60 cr. rarely enrolled)
University Valencia		900 – 1200 €
University Porto	3-4 years (180-240 ECTS). Exceptions of 5y. 5y BA+MA integrated.	700 €
University Bourgogne	3 years (180 ECTS). Exceptions of 5y.	Initial: 270 € Continuous: 900 €

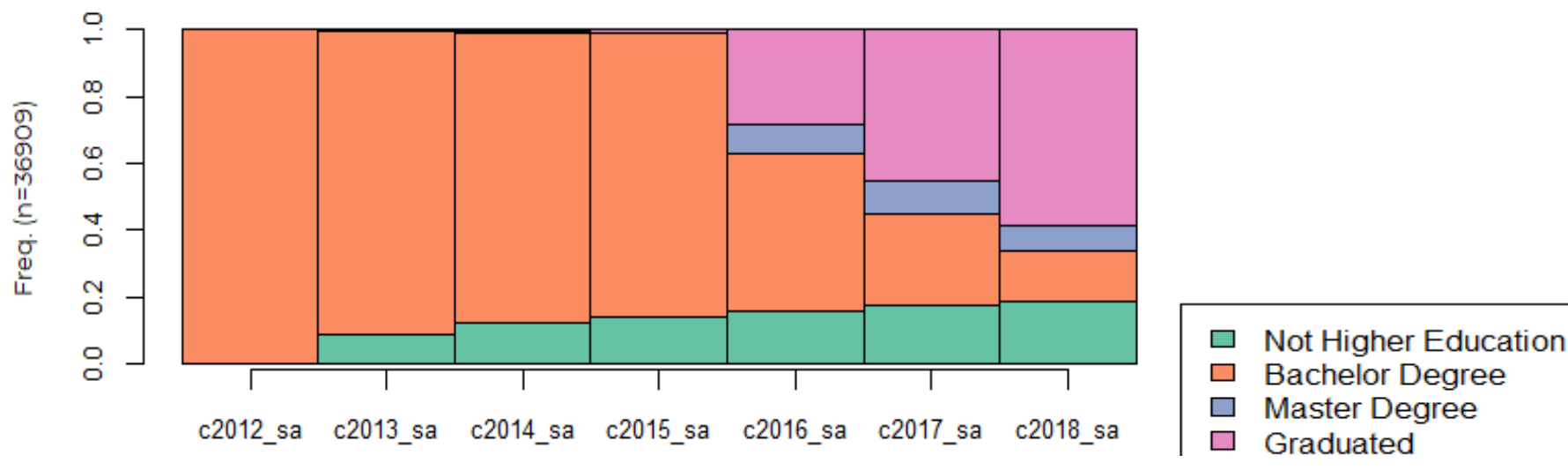
	Bachelor duration	Approx. BA price for 60 cr.	Grants
Catalan on-site	4 years (240 ECTS). Exceptions of 5-6 years.	1300 – 1800 €	<ul style="list-style-type: none"> <li>- Linked to family income.</li> <li>- Depending on performance (65-95% achieved).</li> <li>- Complements by Autonomous Communities and Universities.</li> </ul>
Catalan on-line		2000 – 2200 € (but 60 cr. rarely enrolled)	
University Valencia		900 – 1200 €	
University Porto	3-4 years (180-240 ECTS). Exceptions of 5y. 5y BA+MA integrated.	700 €	<ul style="list-style-type: none"> <li>- Linked to family income.</li> <li>- Depending on performance (25% achieved).</li> </ul>
University Bourgogne	3 years (180 ECTS). Exceptions of 5y.	Initial: 270 € Continuous: 900 €	<ul style="list-style-type: none"> <li>- Linked to family income.</li> </ul>

	Bachelor duration	Approx. BA price for 60 cr.	Grants	Access tracks
Catalan on-site	4 years (240 ECTS). Exceptions of 5-6 years.	1300 – 1800 €	<ul style="list-style-type: none"> <li>- Linked to family income.</li> <li>- Depending on performance (65-95% achieved).</li> <li>- Complements by Autonomous Communities and Universities.</li> </ul>	Academic track. Vocational track. Over different ages. University. Entrance exams.
Catalan on-line		2000 – 2200 € (but 60 cr. rarely enrolled)		Academic track. Vocational track. Over different ages. University.
University Valencia		900 – 1200 €		Academic track. Vocational track. Over different ages. University. Entrance exams.
University Porto	3-4 years (180-240 ECTS). Exceptions of 5y. 5y BA+MA integrated.	700 €	<ul style="list-style-type: none"> <li>- Linked to family income.</li> <li>- Depending on performance (25% achieved).</li> </ul>	Academic track. Vocational track. Over 23y. University. Entrance exams.
University Bourgogne	3 years (180 ECTS). Exceptions of 5y.	Initial: 270 € Continuous: 900 €	- Linked to family income.	Academic track. Vocational track. No entrance exam. Some institutions make their own selection.

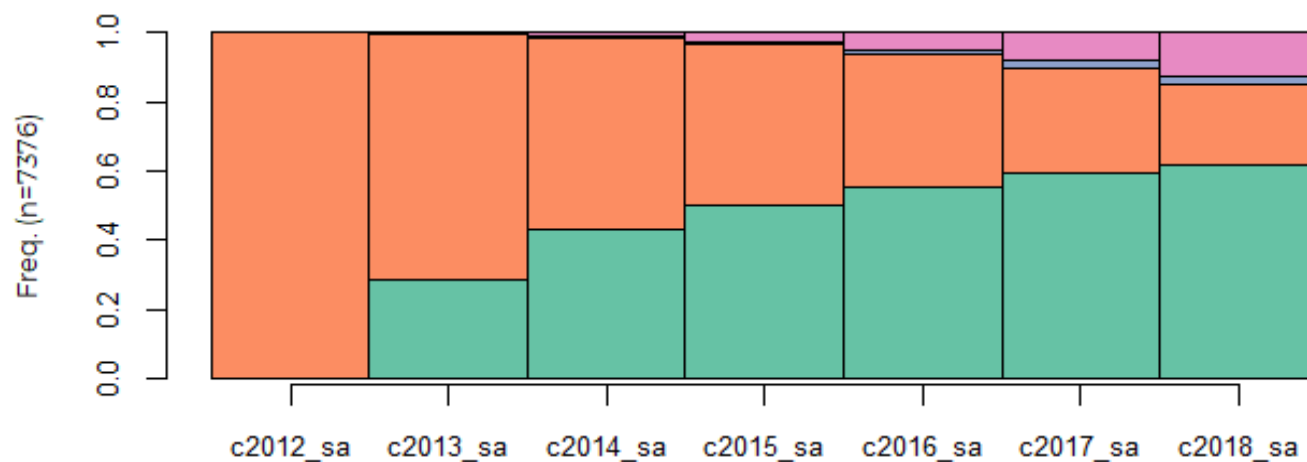
	Bachelor duration	Approx. BA price for 60 cr.	Grants	Access tracks	Progress requirements
Catalan on-site	4 years (240 ECTS). Exceptions of 5-6 years.	1300 – 1800 €	<ul style="list-style-type: none"> <li>- Linked to family income.</li> <li>- Depending on performance (65-95% achieved).</li> <li>- Complements by Autonomous Communities and Universities.</li> </ul>	Academic track. Vocational track. Over different ages. University. Entrance exams.	More or less flexibility depending on HEI. To pass 12 – 20 cr. per year. More flexible requirements for part-time.
Catalan on-line		2000 – 2200 € (but 60 cr. rarely enrolled)		Academic track. Vocational track. Over different ages. University.	To pass 6 cr. first year. No requirements after that. The most flexible HEI.
University Valencia		900 – 1200 €		Academic track. Vocational track. Over different ages. University. Entrance exams.	To pass 12 cr. per year.
University Porto	3-4 years (180-240 ECTS). Exceptions of 5y. 5y BA+MA integrated.	700 €	<ul style="list-style-type: none"> <li>- Linked to family income.</li> <li>- Depending on performance (25% achieved).</li> </ul>	Academic track. Vocational track. Over 23y. University. Entrance exams.	To pass 60 cr. in 3 years.
University Bourgogne	3 years (180 ECTS). Exceptions of 5y.	Initial: 270 € Continuous: 900 €	- Linked to family income.	Academic track. Vocational track. No entrance exam. Some institutions make their own selection.	Not credits, but courses. Student must pass with an average grade of all the course components. Need special permission to retake a course. Part-time must be accepted.



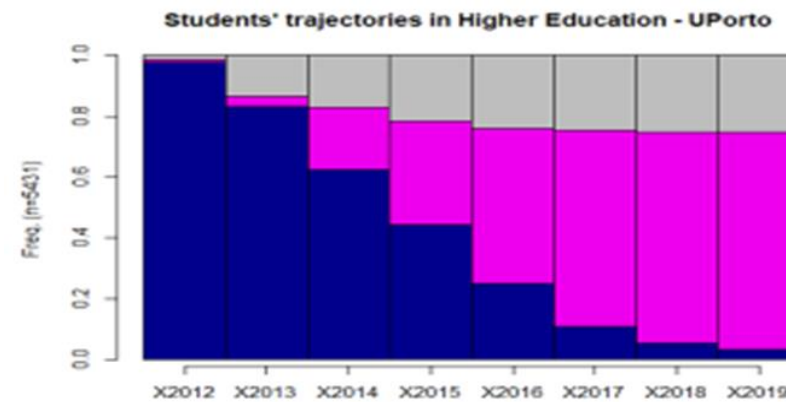
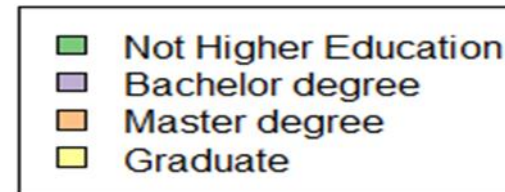
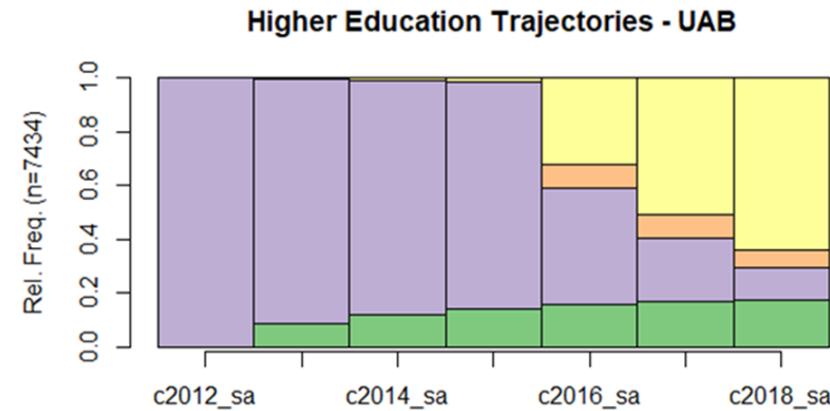
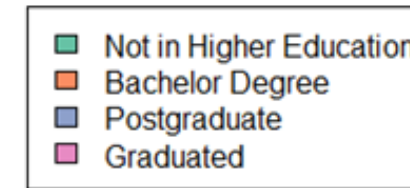
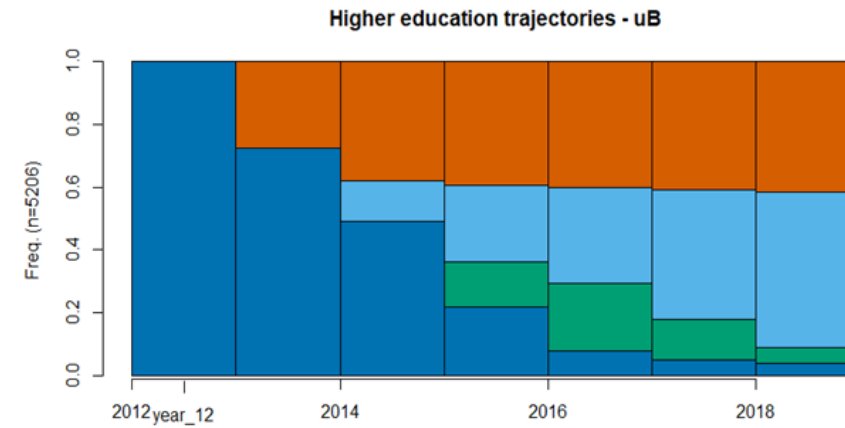
### Higher Education Trajectories - Catalan Face-to-face University



### Higher Education Trajectories - Catalan Distance University



# Complex Trajectories



	<b>Complex Trajectories (other than t+1)</b>	<b>1st year drop-out</b>	<b>Total drop-out</b>	<b>Change of degree</b>	<b>Persistence</b>	<b>Access to Master degree</b>
<b>Catalan face to face</b>	47,1%	6,3%	19,1%	21,2%	8%	18,4%
<b>Catalan distance</b>	92%	23,6%	62,4%	10,4%	19,3%	4,4%
<b>UValència</b>	48,6%	18,9%	29,5%	8,8%	6,3%	13,6%
<b>UPorto</b>	43,3%	11,5%	25,4%	9,2%	2,5%	44,4%
<b>UBourgogne</b>	57,8%	25%	41,4%	20%	0,5%	27,9%

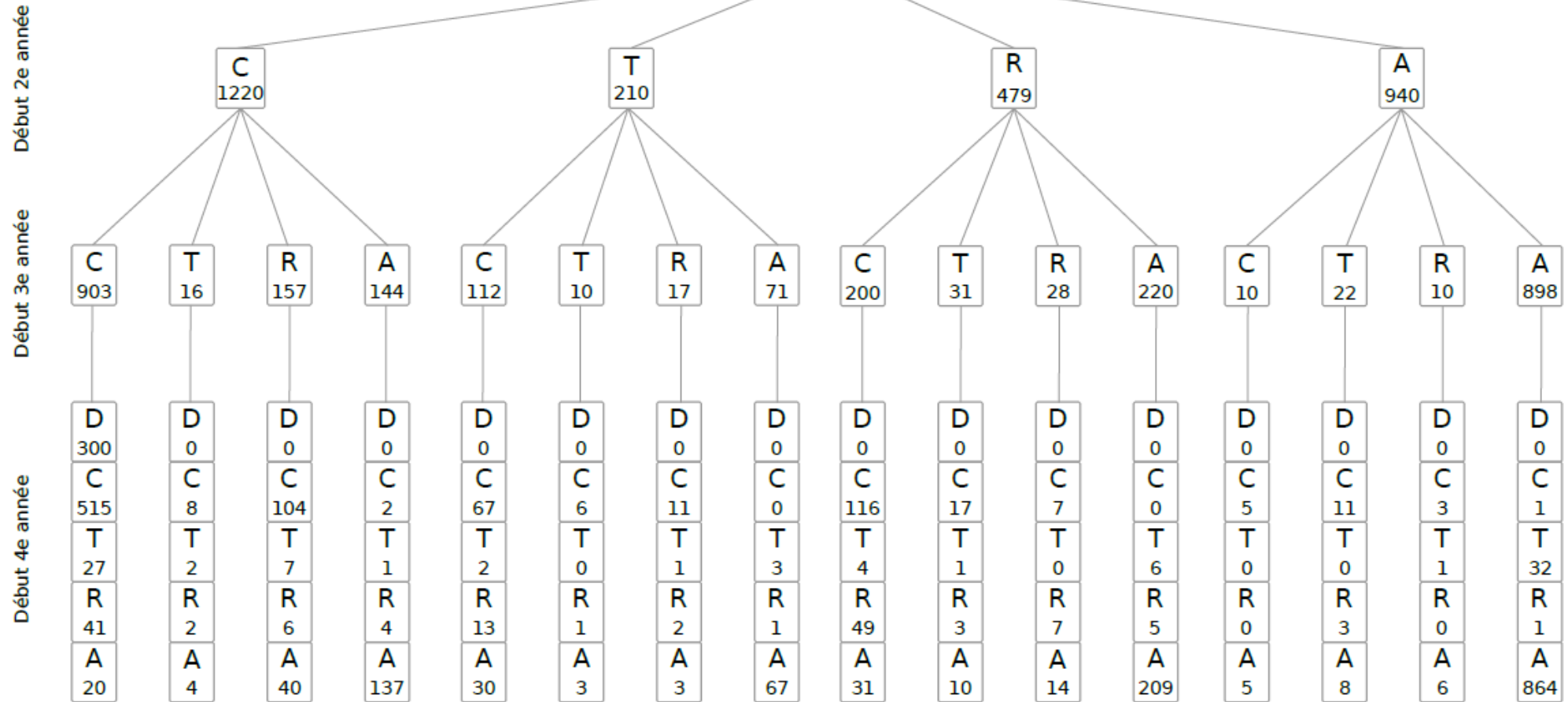
		<b>Complex Trajectories (other than t+1)</b>	<b>1st year drop-out</b>	<b>Total drop-out</b>	<b>Change of degree</b>	<b>Persistence</b>	<b>Access to Master degree</b>
<b>Catalan face to face</b>	Non-univ.	46,9	6,6	20,4	19,7	8,4	19,7
	Univers.	46,5	4,9	15,4	24	7,7	24
<b>Catalan distance</b>	Non-univ.	--	--	--	--	--	--
	Univers.	--	--	--	--	--	--
<b>UValència</b>	Non-univ.	47,4	17,3	27,8	8,6	6,4	14,7
	Univers.	50,4	21,7	32,2	9,2	6,3	11,9
<b>UPorto</b>	Non-univ.	--	--	--	--	--	--
	Univers.	--	--	--	--	--	--
<b>UBourgogne</b>	Low SES	61	28	46	20	0	25
	High SES	55	22	37	20	1	30

How can we create a typology of complex trajectories ?

Étudiants inscrits pour la 1ère fois en 2012 en licence

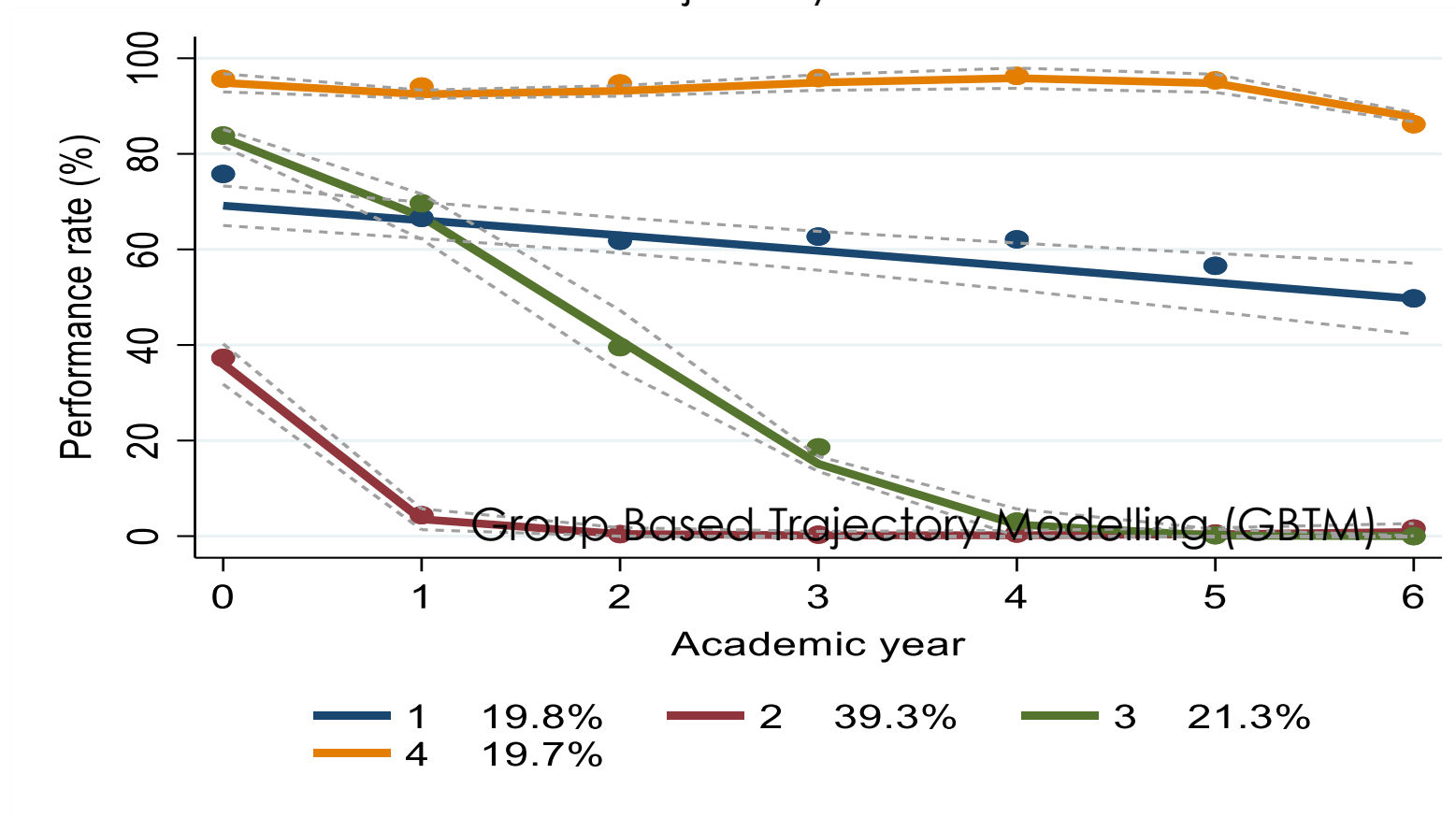
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Université de Bourgogne



C = continuité  
T = transfert  
R = redoublement  
A = abandon  
D = diplômé (pas de poursuite en master)

Performance Rate trajectory of students. UOC 2012 cohort



Note: Graduated=missing; drop-out=0; early leavers included  
 Typology using the Group Based Trajectory Modelling (GBTM). In each type or group, we classify those students who follow a similar pattern of performance and pace over the years we are observing, which is represented in each of the lines of the trajectory charts..