

When the Majority is the Minority: Social Compositions of Swiss Universities

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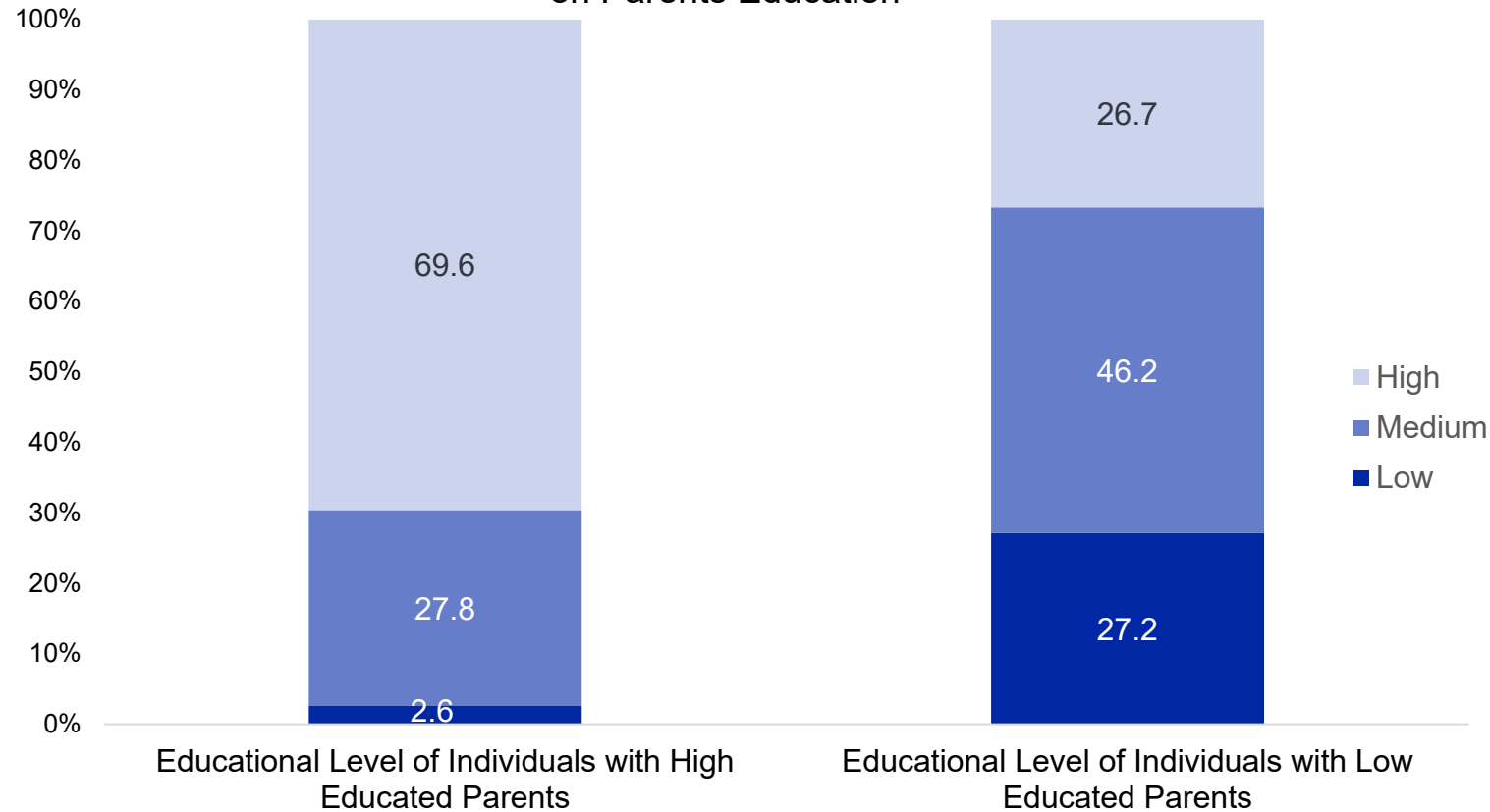
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Education Level of Swiss Individuals Between 25-59 Years Old Conditional on Parents Education



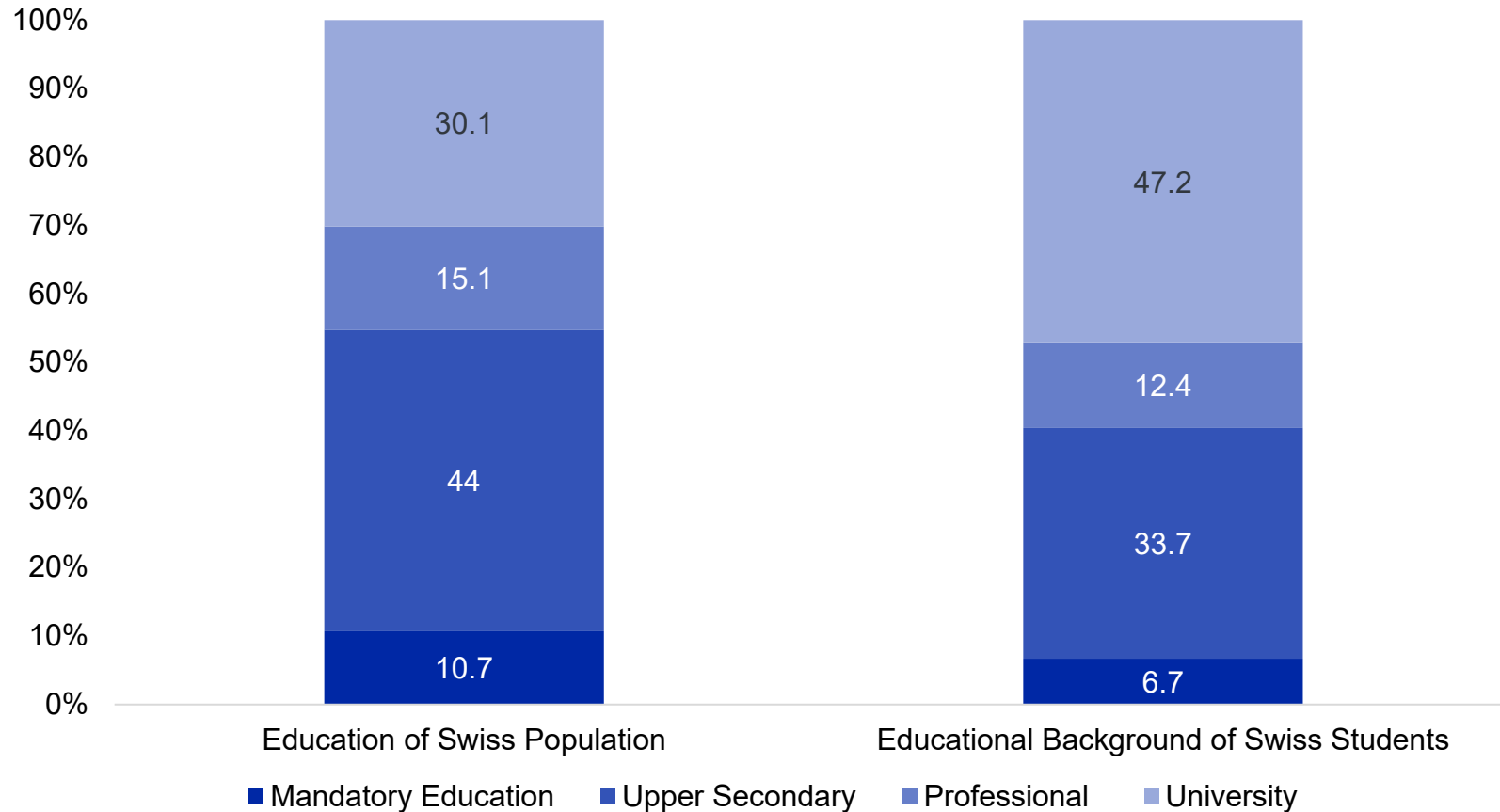
Source: BFS (2022)

Key Takeaways

- Low intergenerational educational mobility
- **70%** have tertiary education in Switzerland if parents had tertiary education
- Only **26.7%** have tertiary education if parents had at most mandatory education



Switzerland in 2020



Key Takeaways

- 47.2% of Swiss students have parents with an academic background which was significantly higher than in the general population (30%)
- **Underrepresentation** of children with **low-educated** background
- **Overrepresentation** of children with **academic** parents

Sources: Own calculation based on: BFS – Soziale und wirtschaftliche Lage der Studierenden (2021) & BFS – Schweizerische Arbeitskräfteerhebung (2021)



On the Inequality in Access to Higher Education in Switzerland

The Problem: unequal access and sorting into universities as multiple factors discourage working-class children from getting a higher education

Negative Externalities:

- Reduced economic development
 - Missed human capital potential if best-fitted individuals do not get a university education
 - Shortage in high-skilled labor and innovation activities
- Lack of diversity within upper secondary schools and diversity impedes the development of more well-rounded and questioning opinions and personalities

Inequality:

- University education is primarily financed by taxes
 - High-income individuals benefit disproportionately
- Reduced social mobility creating intergenerational poverty, greater income inequality, and social exclusion

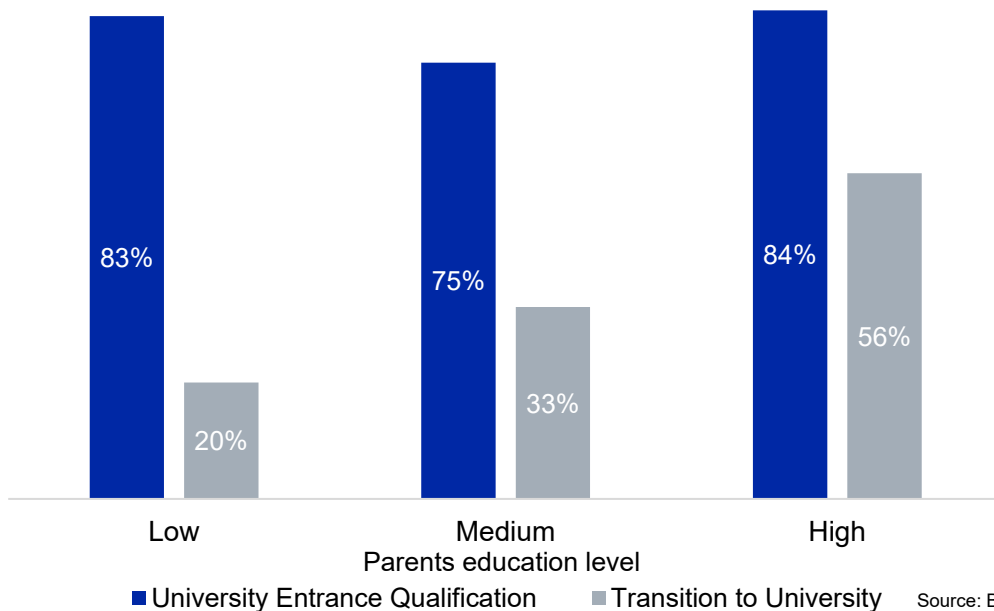


Target Group

Swiss **high school students** at the age of **16 and above**

- Passed entrance examination and have shown the potential for a university degree
- Overcame obstacles in lower secondary school
- Show educational aspiration

Structure of educational transition in Switzerland



The sub-problem: Is it possible that even if children from low-educated households graduate from high school and have the opportunity to go to university, they more frequently diverge to job training programs?



Structural Diagnostics

Problems:

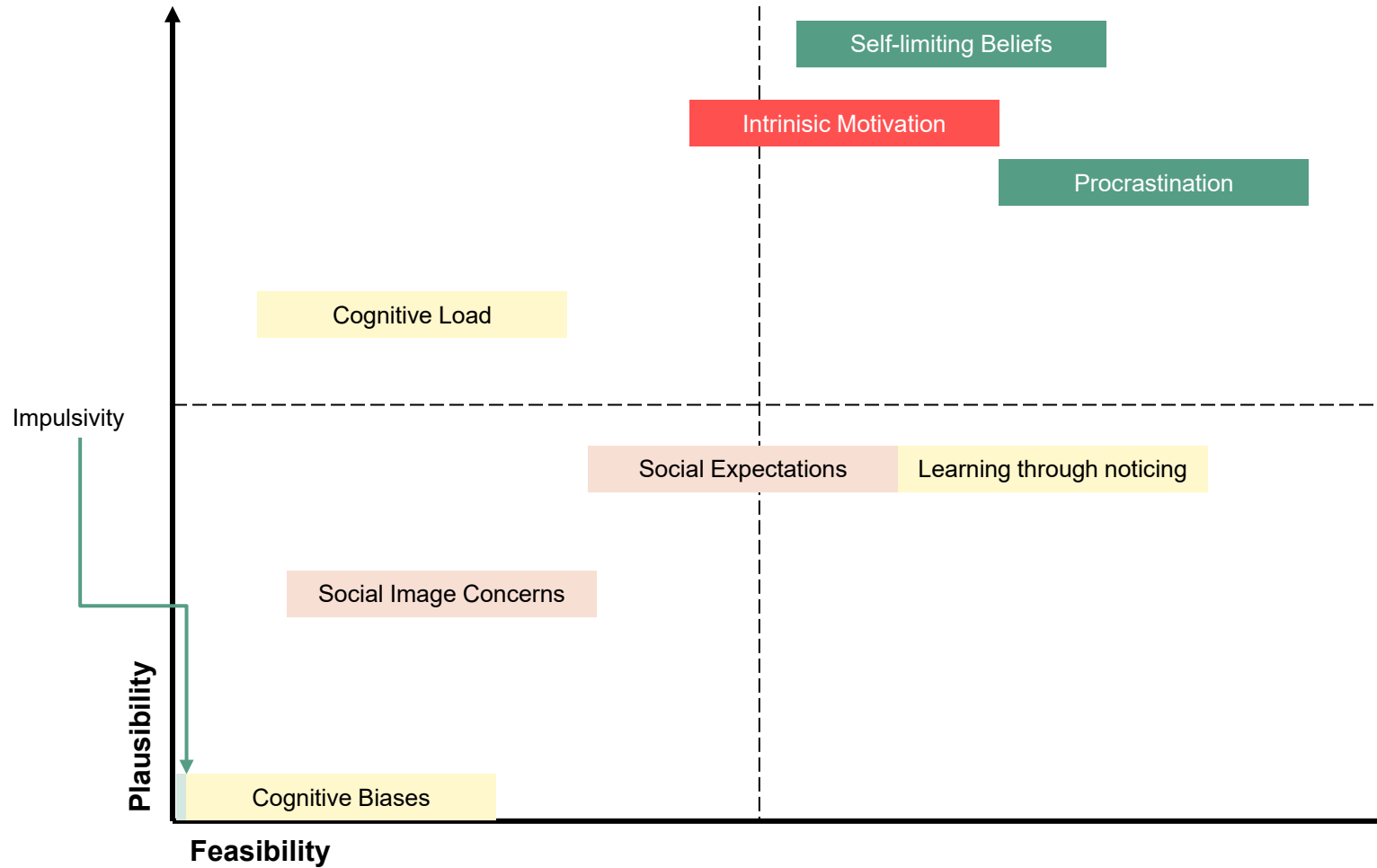
- High cost of living and opportunity cost
- Imperfect information on the benefits and cost of education
- Systemic discrimination and differential access to support (parents/tutors); High school and secondary school already determinant

PRI Solutions:

- **Subsidies** to universities: As previously seen, low tuition does not solve all problems
- **Scholarships and loans**: insufficient (only 4% of student revenues); Parent income is the most important source of financing (52%)
- **High school advisors**: provision of scholarship support; might be biased towards pushing working-class students to apprenticeships
- **Information campaigns**: help gain a better understanding of the benefits and costs of higher education; generally inefficient according to most research (Herbaut & Gevens, 2020)
- **Regulatory policies** absent; might be politically undesirable



Feasibility-Plausibility Diagram





MSI Framework: Intrinsic Motivation

- People tend to avoid decisions that conflict with their values and their perceptions about themselves
- A different philosophy of a *proper* job. Being an academic is in conflict with identity
 - Belief that doing a desk job is not real work
 - Real work is doing manual labor
- Cultural differences regarding future orientation impact educational attainment (Figlio et al, 2019)
 - Large differences between French, Italian, and German-speaking parts regarding attitudes towards jobs and university in general



MSI Framework: Procrastination

- People tend to be too optimistic about their willingness to bear costs in the future
- Procrastination in applying for a university scholarship or saving for university expenses
- **Costs** of university applications are **very salient** due to the numerous documents required, yet long-term future **benefits are highly uncertain** (Lavecchia et al., 2015)

Achtung Je nach Kanton müssen Sie mit sehr langen Bearbeitungszeiten rechnen.

Um Ihren Studienbeginn nicht zu gefährden, sollten Sie die Wartezeit nicht mit Erwerbsarbeit überbrücken.
Besser ist es, sich vor dem Beginn des Studiums eine kleine Reserve zu erarbeiten, um sich die ersten Monate
des Studiums vorfinanzieren zu können.

<https://www.studienfinanzierung.uzh.ch/de/finanzierung.html>

Die Gesuche werden in der Reihenfolge ihres Eingangs geprüft. Aktuell bearbeiten wir Gesuche, die zwischen **Juni und August 2022** eingegangen sind.

<https://www.zh.ch/de/bildung/berufs-studien-laufbahnberatung/ausbildungsbeitraege.html>

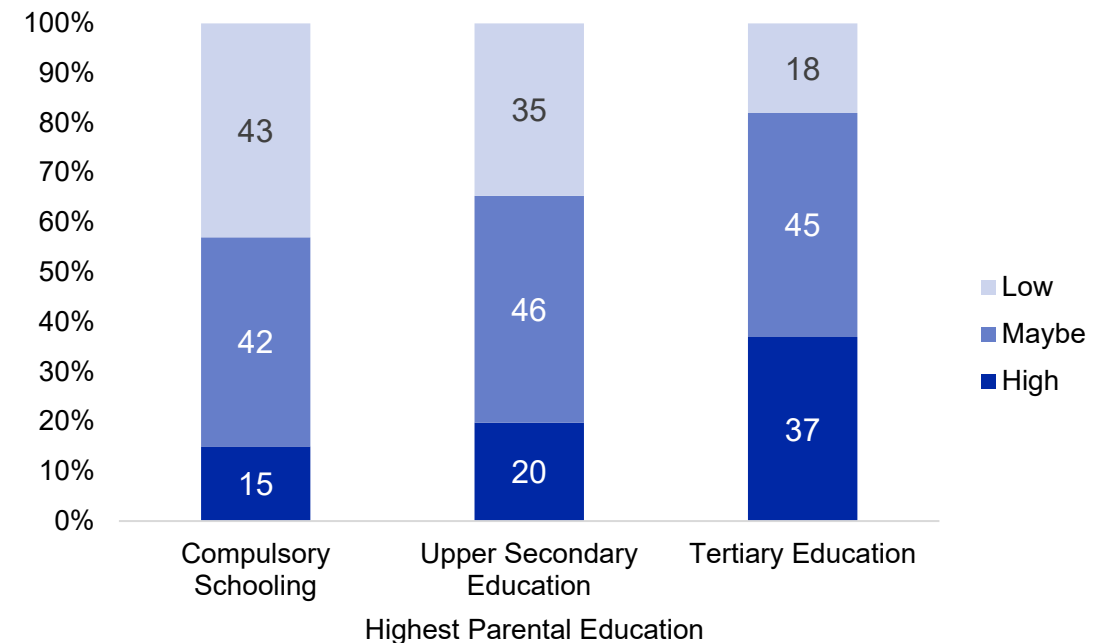
Retrieved 21.04.2023 from the UZH and City of Zurich on scholarships:

- UZH: Highlighting **uncertain benefits** due to long waiting periods
- CoZ: Currently, considering applications from June to August 2022

MSI Framework: Limiting-Mental Models

- Students with impoverished families are more likely to have a fixed mindset and thus underestimate their capacity to succeed as a first-person at university
- Belief that they are born with certain qualities and lack Required skill set
 - Avoid challenges that they fear failing
 - Avoid new unknown terrains

Self perceived probability of achieving a tertiary degree of Swiss children born between 1997-2002



Source: Own calculation based on TREE2, 2021.



Testing - Vignette Experiment

Outline

Who: Students in their last school year

Where: Kantonsschule Zürcher Oberland (KZO)

Tool: Qualtrics

Language: German

Experiment date: 12.04.2023

Experiment Design: Within-Subject Design (3 treatment groups)

Mechanisms to test

Procrastination

Intrinsic Motivation

Self-Limiting Beliefs



Our Respondents

Age

Age	17	18	19	20	Total
Frequency	2	25	4	1	32

Gender

Male	Female
15	17

Parent's highest education tertiary?

Yes	No
23	9



Our Scenarios - The Baseline

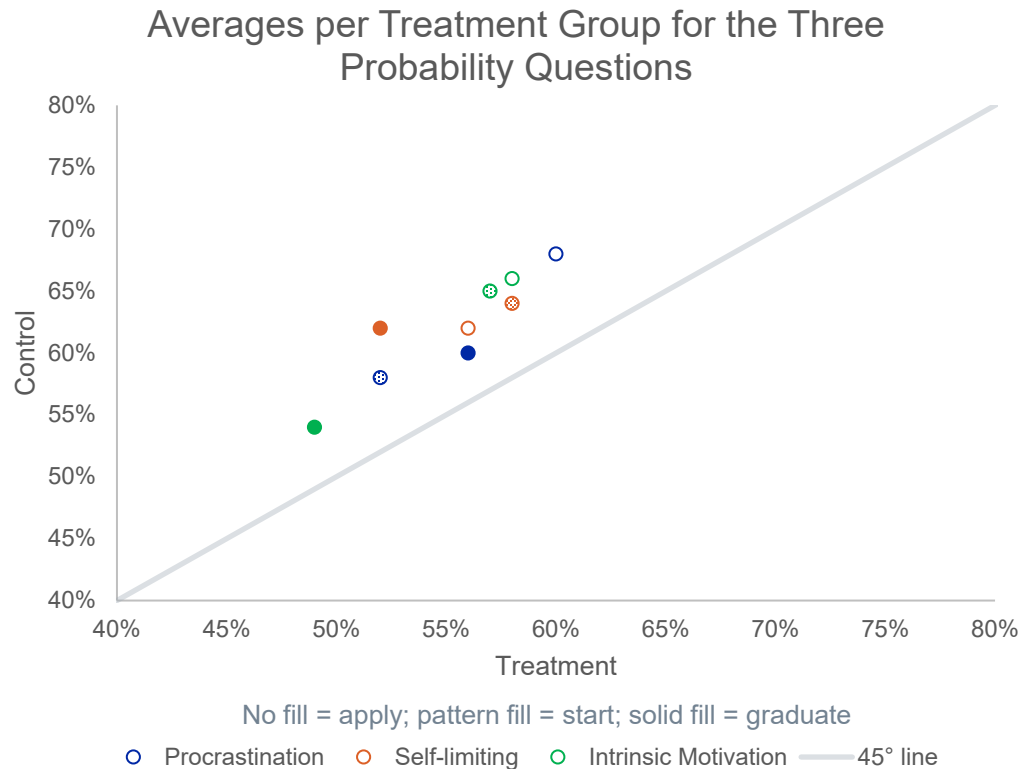
David is 18 years old, and he is a student at Kantonsschule Uster. His father is a carpenter, and his mother works as a retirement-home nurse. He also has a younger sister. David is thinking about what he wants to do after he finishes high school. He hesitates between going to the university or starting a job.



Procrastination	Intrinsic Motivation	Self-Limiting Beliefs
<p>David is 18 years old, and he is a student at Kantonsschule Uster. His father is a carpenter, and his mother works as a retirement-home nurse. He also has a younger sister. David is thinking about what he wants to do after he finishes high school. He hesitates between going to the university or starting a job.</p> <p>Since a few months, David intends to exercise regularly but despite his intentions, David keeps on postponing the start date to the next week</p>	<p>David is 18 years old, and he is a student at Kantonsschule Uster. His father is a carpenter, and his mother works as a retirement-home nurse. He also has a younger sister. David is thinking about what he wants to do after he finishes high school. He hesitates between going to the university or starting a job.</p> <p>Just like his father, David enjoys spending his summer holidays fixing things around the house.</p>	<p>David is 18 years old, and he is a student at Kantonsschule Uster. His father is a carpenter, and his mother works as a retirement-home nurse. He also has a younger sister. David is thinking about what he wants to do after he finishes high school. He hesitates between going to the university or starting a job.</p> <p>David believes that he was lucky to pass the high school entrance examination as no one else of his best friends passed.</p>

Results

Probability of applying to, starting, and graduating university:



Some Remarks:

- Severe overestimation across the board (structural problem)
- The effect is moderately sized, but always in the right direction
- Procrastination is particularly relevant for probability of applying, intrinsic motivation for probability of starting, and self-limiting beliefs for the probability of graduating (biggest magnitude, -10%)

Other Results

- Factors driving David's motivation to (not) apply for a scholarship:
 - David will miss the deadline: Control = 0%, Procrastination = 27%!
 - David will not apply: Control = 16%, Intrinsic Motivation = 17% (biggest effect)
- Caution: the sample size is very small, but once again the effects fit our narrative
- Costly engagement: Change in engagement level with respect to control

	Procrastination	Self-limiting	Intrinsic Motivation
Increased	1	2	1
Decreased	5	0	1
Unchanged	5	7	10
Net Effect	-4	2	0



Results - Conclusion

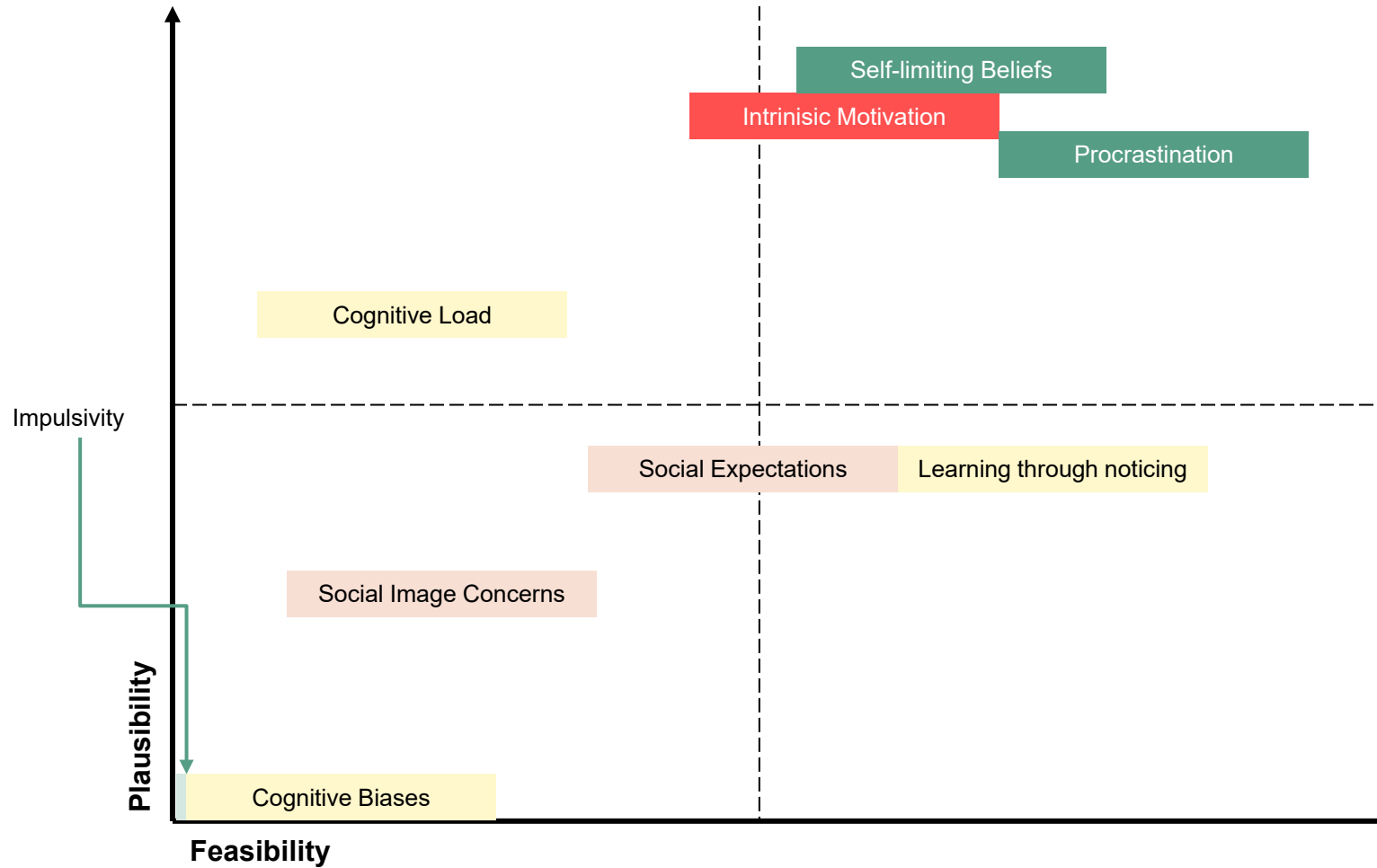
- Overall, the answers are encouraging, despite the sample size
- They point to the interplay of many mechanisms (→ different policies might be suited at different times)
- Self-limiting mindsets emerge as the strongest factor:

Averages Across the Three Probability Questions

	Control	Procrastination	Control	Self-limiting	Control	Intrinsic Motivation
Average	62%	56%	63%	55%	62%	55%
Difference		6%		8%		7%



Feasibility-Plausibility Diagram





PRix: Augmented Policy Tools for Self-Limiting Beliefs

In the vignette study, policies aimed at self-limiting beliefs showed promising results:

Mean Control

Mean Policy

5.56 (2.36)

7.56 (1.26)

Self-limiting control question: From 0 (lowest) to 10 (highest), how likely is David to apply to go to university after he finishes high school?

Policy question: David had the opportunity to think about his options already. Indeed, last year he had to do a presentation in one of his classes about two dream jobs: one job had to require professional training, and another a university degree. He was also required to come up with a concrete plan for reaching each of the two dream jobs. On a scale of 0 (lowest) to 10 (highest), how likely is David now to apply for university?



PRix: Augmented Policy Tools for Self-Limiting Beliefs

Self-Limiting Beliefs

- Dream job & university degree presentations at the beginning and end of high school
- Students must present 2 job paths (university vs. vocational) they are interested in, including necessary steps to reach the goal

Our proposed policy:

- Introduce **obligatory** 'dream vocational training & university degree' presentations
- Create a **website** where students find information on career paths and all scholarship and financial support possibilities, in addition to requirements to reach specific careers

How is our policy augmented?

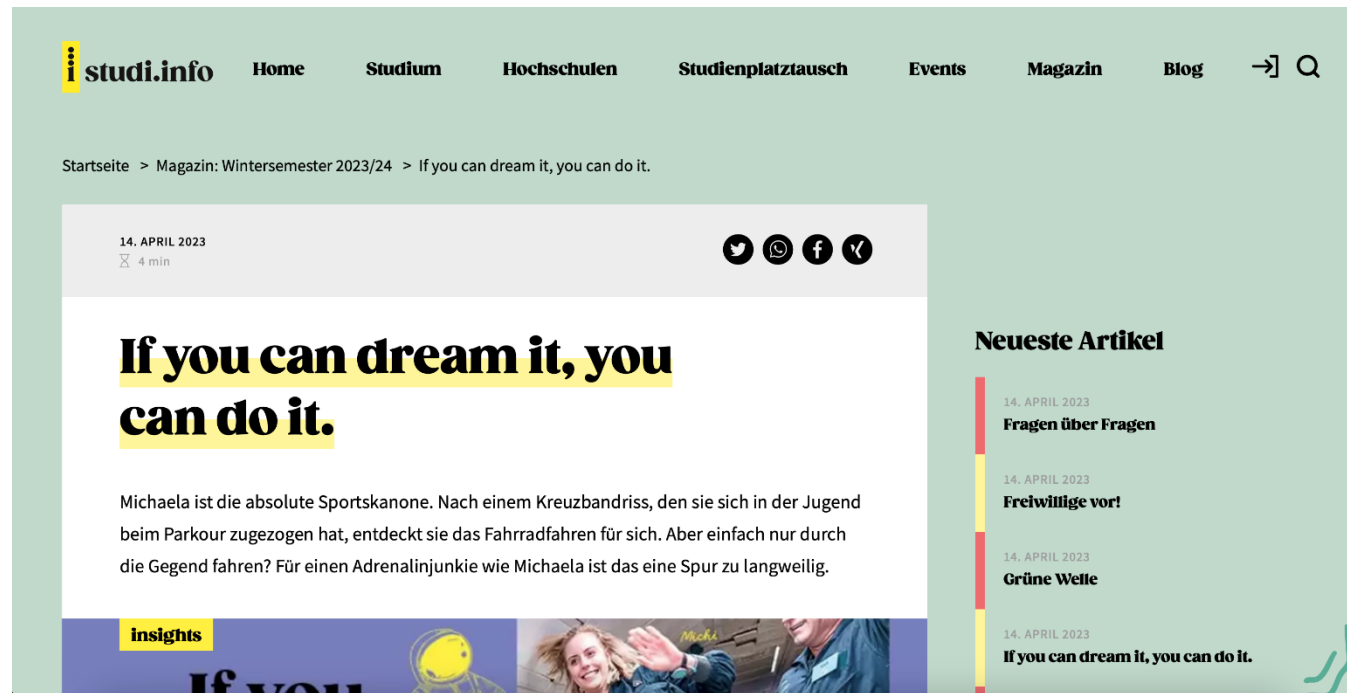
- In addition to gaining more **information**, students also have to come up with a clear plan and milestones to reach where they want to be. They can infer what they can achieve through their own effort step by step. This can help overcome self-limiting beliefs by changing mental models.

PRix: Augmented Policy Tools for Self-Limiting Beliefs

Building on existing high school regulations:

- Nowadays, most high schools in the Canton of Zurich do a visit in a career advice office (biz, Berufsinformationszentrum). Class teachers have to organize such a visit with the whole class.

Building on what already exists, but with behavioral mechanisms in mind:



The screenshot shows a website interface for 'studi.info'. The navigation bar includes 'Home', 'Studium', 'Hochschulen', 'Studienplatztausch', 'Events', 'Magazin', and 'Blog'. The breadcrumb trail reads 'Startseite > Magazin: Wintersemester 2023/24 > If you can dream it, you can do it.' The main article is dated '14. APRIL 2023' and is '4 min' long. The title 'If you can dream it, you can do it.' is highlighted in yellow. The text below the title reads: 'Michaela ist die absolute Sportskanone. Nach einem Kreuzbandriss, den sie sich in der Jugend beim Parkour zugezogen hat, entdeckt sie das Fahrradfahren für sich. Aber einfach nur durch die Gegend fahren? Für einen Adrenalinjunkie wie Michaela ist das eine Spur zu langweilig.' A 'Neueste Artikel' sidebar on the right lists three other articles: 'Fragen über Fragen', 'Freiwillige vor!', and 'Grüne Welle', all dated '14. APRIL 2023'. The current article is listed at the bottom of this sidebar. A 'insights' tag is visible at the bottom left of the article content area.

<https://studi.info/artikel/if-you-can-dream-it-you-can-do-it>



Appendix Sources

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Vignette Experiment

Vignettes are short stories that describe the essential elements of hypothetical scenarios, which allow us to study subjects' values, perceptions and mental models, and how these react to changes in the scenarios described by the vignettes.

Steps:

- 1) Control version (Baseline scenario)
- 2) Survey about attitudes, plans, intentions
- 3) Offer to engage in costly action concerning structural approaches
- 4) Alternative version (3 treatment versions: Procrastination, Intrinsic Motivation, Self-limiting Beliefs)
- 5) Survey about attitudes, plans, intentions
- 6) Offer to engage in costly action with the augmented behavioral approaches
- 1) Survey about individual characteristics such as age, gender etc.



Vignette Experiment

Surveying Attitudes, Plans, and Intentions

- 1) From 0 (lowest) to 10 (highest), how likely is David to apply to go to university after he finishes high school?
- 2) From 0 (lowest) to 10 (highest), how likely is David to go to university after he finishes high school?
- 3) From 0 (lowest) to 10 (highest), how likely is it that David will succeed at university?
- 4) David knows that all students can apply for a scholarship if they go to university. When is he likely to start the application for the scholarship?
 - *More than 4 months before the deadline*
 - *1-4 months before the deadline*
 - *Less than four weeks before the deadline*
 - *He will miss the deadline*
 - *He will not apply*
- 5) Rank the following statements from 1 (most likely) to 6 (least likely) to describe David's situation:
 - *He will be able to finance his cost of living during his studies.*
 - *His parents will be able to support him financially during his studies.*
 - *He believes that he does not have the talent to study at a university.*
 - *He thinks manual jobs are more satisfying and valuable than office jobs.*
 - *He thinks he will be unhappy at university.*
 - *He will start his decision process too late and therefore struggle to consider both alternatives (job vs. university) extensively.*



Vignette Experiment

Offer to engage in costly action

Control: We will organize an information campaign about different possibilities at university, how many minutes are you be willing to discuss with us to help us find the most relevant issues for high school students?

Procrastination: We will organize a team that helps students with informing about and filling in their scholarship applications. How many minutes would you be willing to discuss with us to help us to find the most relevant issues for high school students?

Intrinsic Motivation: We will organize an information campaign that illustrates that university jobs can be fulfilling and rewarding. How many minutes would you be willing to discuss with us to help us find the most relevant issues for high school students?

Self-limiting beliefs: We will organize a campaign that encourages students to believe in themselves and gain confidence that they can succeed at university. How many minutes would you be willing to discuss with us to help us find the most relevant issues for high school students?

Answer options:

- *I don't want to participate at all*
- *Less than 15 minutes.*
- *15-30 minutes.*
- *30-60 minutes.*
- *60-90 minutes.*
- *More than 90 minutes*



Vignette Experiment

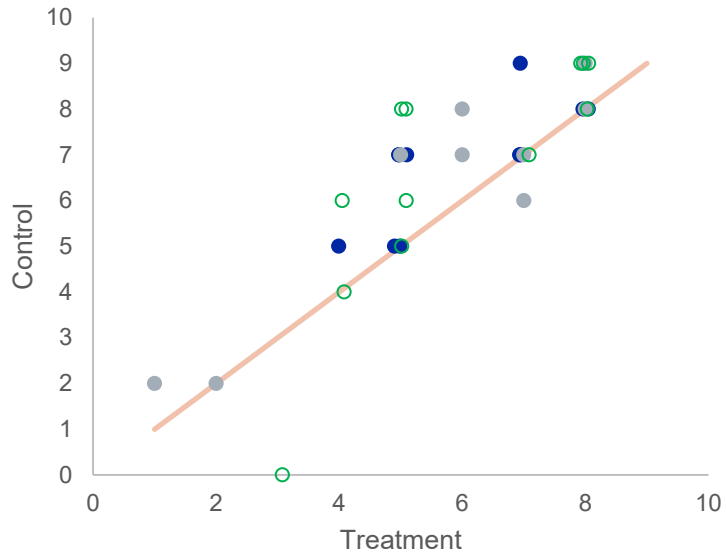
Testing Policies

- **Control:** On a scale from 0 (lowest) to 10 (highest), how likely is David to apply for university after going to an information campaign that informs students about the possibilities, costs, and benefits of going to university?
- **Procrastination:** On a scale from 0 (lowest) to 10 (highest), compared to a traditional scholarship application process, how likely would David apply for a scholarship if he could get a quicker but only preliminary decision within a month based on the three most important documents that he will easily have at hand?
- **Intrinsic Motivation:** On a scale from 0 (lowest) to 10 (highest), how likely is David to apply for university if the scholarship was named “Max Frisch Scholarship”, who was a famous Swiss writer, born in Zurich, and the first of his family to graduate from university?
- **Self-limiting beliefs (1):** David attends a conference where a successful and respected adult with the same background as his talks about their experience at university and their career. On a scale of 0 (lowest) to 10 (highest), how likely is David now to apply for university?
- **Self-limiting beliefs (2):** David had the opportunity to think about his options already. Indeed, last year he had to do a presentation in one of his classes about two dream jobs: one job had to require professional training, and another a university degree. He was also required to come up with a concrete plan for reaching each of the two dream jobs. On a scale of 0 (lowest) to 10 (highest), how likely is David now to apply for university?



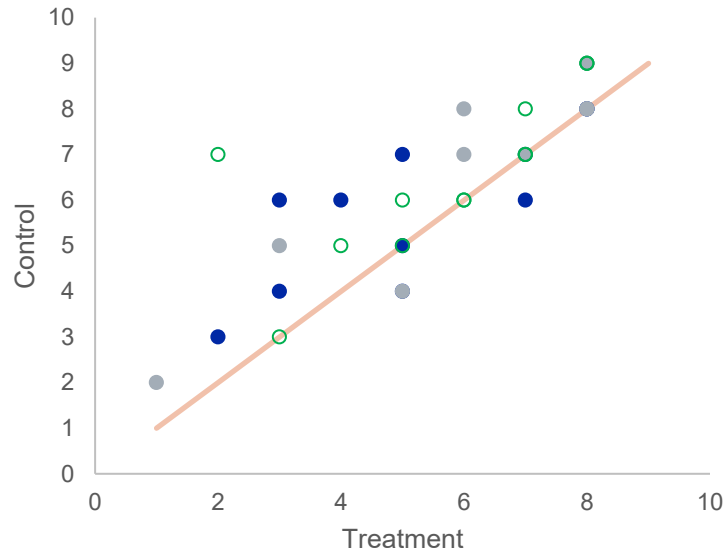
Results – Detailed

Probability (10 = 100%) of Applying to University



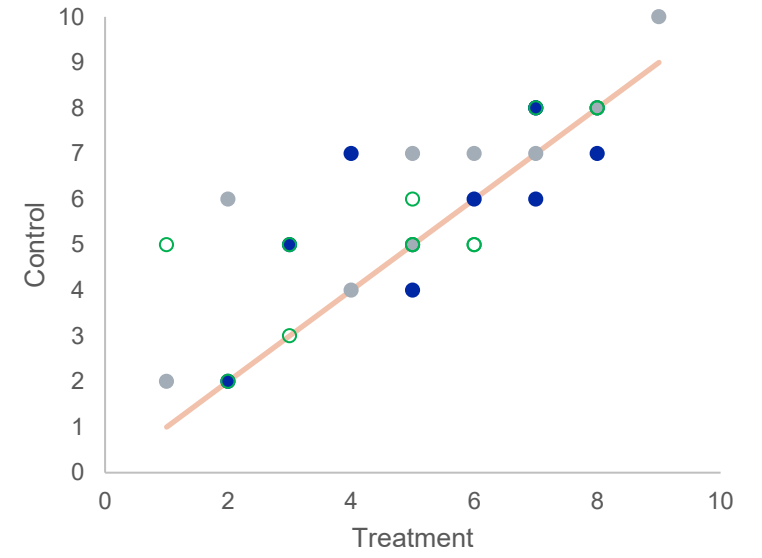
● Procrastination ● Self-limiting
○ Intrinsic Motivation — 45° line

Probability (10 = 100%) of Starting to University



● Procrastination ● Self-limiting
○ Intrinsic Motivation — 45° line

Probability (10 = 100%) of Graduating from University



● Procrastination ● Self-limiting
○ Intrinsic Motivation — 45° line



PRix: Augmented Policy Tools for Tackling Behavioral Problems

Intrinsic Motivation

Name the same already available scholarships differently depending on the region after well-known and inspiring members of the community, village, or school. With this, we try to tackle the root of identity and show that having specific values within a family/community does not need to mean that one is at odds with them.

Procrastination

Simplify application process for scholarships on various levels. Reduce the highly salient costs of gathering and handing in various documents by requiring as a first application step only a few key documents such as:

- Own tax returns
- Parents' tax returns
- Attestation of social assistance payments if it applies

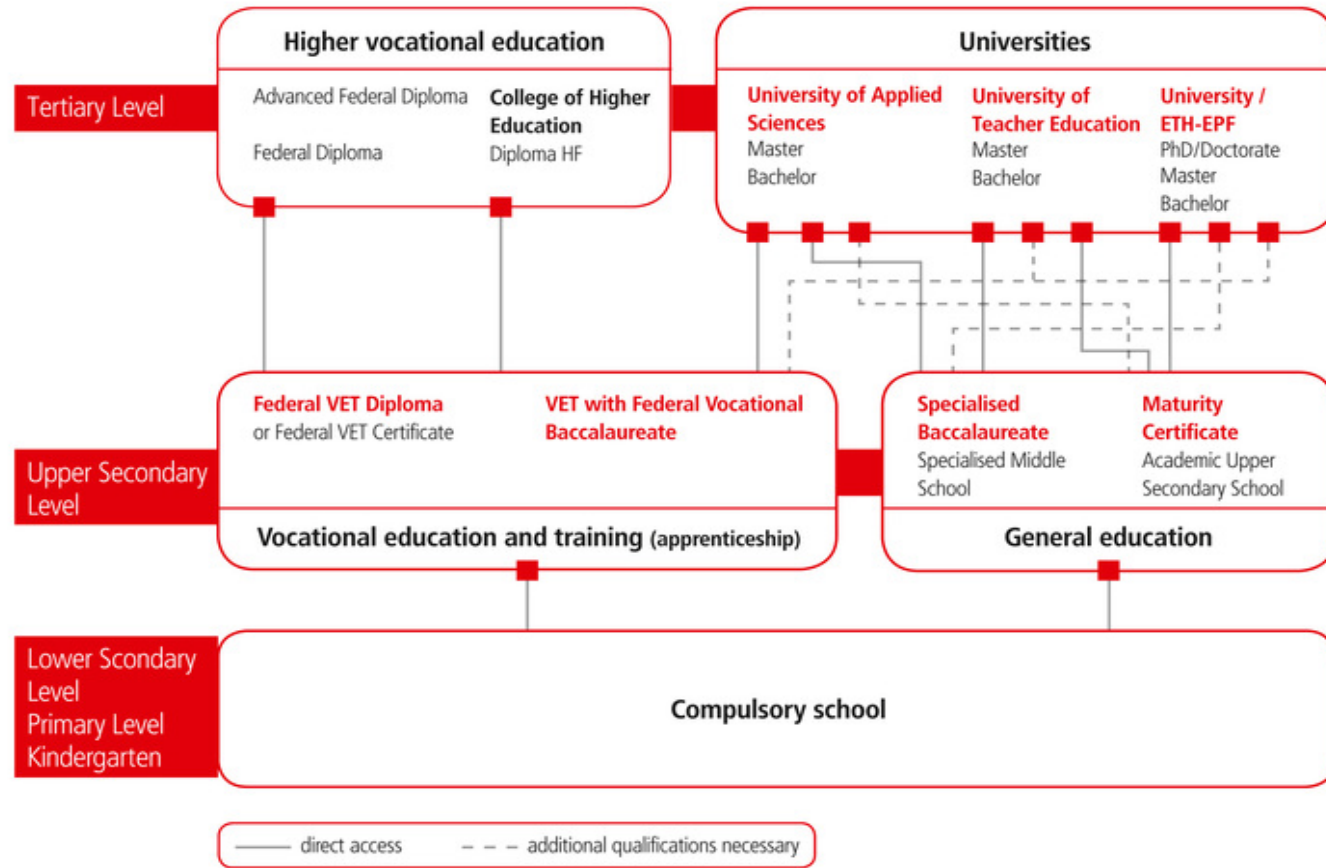
Reduce uncertain long-term future benefits by making a quick preliminary decision based on these key documents within the first month after application. During a transitional period, pay-out of limited funds (50-75%) and require submission of all documents. This tackles procrastination. Further, the endowment effect can work in favor of making the final step toward application.



The Swiss education system

Swiss Education System in a nutshell...

More complex than holes in the Emmentaler Cheese



Source: <https://www.educationsuisse.ch/en/education-switzerland/swiss-educational-system>