

Selective admission in higher education: risks and limiting conditions

Leon Cremonini, Wim van Niekerk and Hans Vossensteyn
February 2010

This memorandum lists the pros (I) and cons (II) of selection. On the basis of these arguments, it considers the conditions under which the risks of selection can be obviated or reduced as far as possible, as the case may be.

I. Arguments in favour of selection

1. Positive effect on students' *choice, motivation and commitment*

- Successful students are students who know what they choose and are motivated (Warps, 2009).
- Leads to mutual commitment between institution and student. Korthals (2008, p. 16) refers to a few practical examples:
 - Student and programme sign a contract, wherein the student undertakes to give the study his all and the programme undertakes to provide intensive and challenging courses.
 - More self-selection and self-reflection among prospective students. Prospective students will reflect more seriously on what they wish to study.
 - Students run less risk of being expelled from the programme after a year, following a negative binding recommendation regarding the continuation of their studies. This is a significant advantage, especially for programmes attracting a substantial number of foreign students.
- Under the form of unregulated institutional student selection (i.e. where the institution alone decides), selection can yield positive consequences (OECD, 2008b.) such as providing prospective students with more options from which to choose (see for example the case of Croatia p. 55, box 6.4)

2. Higher *outcomes, lower drop-out rates*

- A 60% reduction in drop-out rates among selected medicine students (Urlings-Strop, 2009); selection based on cognitive and non-cognitive qualities, no difference in final exams marks among control group.
- For example, the Hotel School in the Hague: a first year drop-out rate of 8%, versus 20-30% in other higher education economics programmes (Dooge, 2005).
- Question the right of access to programmes for categories of students with significantly higher drop-out rates, for example students enrolled in a *WO* bachelor's programme after completing an *HBO* propaedeutic year: the drop-out rate is nearly 2.5 times higher than among *VWO* graduates, while many abandon higher education altogether (VSNU, 2008).

PM: outcomes figures for programmes with an admissions quota.

- Benefits of “Early tracking” (see later) are greater than the benefits of introducing later selection. Early tracking leads to greater class homogeneity, which in turn leads to better understanding of learning materials by pupils (Webbink et al., 2009)¹.

3. Improved *quality* of programme and graduates

- Study success and high quality attract better students, which bolsters quality even more (Korthals, 2008, p. 16).

4. *Profiling* by institutions

- Selection forces institutions to profile their distinctive features, preferably from various perspectives (i.e., not only selecting to attract the best students, but also programmes focusing on educational achievement among ethnic minorities or innovative educational formats, for example), thus promoting diversity in the system.
- Selection only to be enforced if the selection criteria are perfectly clear, for example with specific educational concepts. Selection will have little predictive value when the context of the programme for which students are selected differs hardly, if at all, from that of a standard programme (Korthals, 2006, p. 9).
- Selection can boost differentiation within a single institutional typeⁱ (OECD 2008a, p. 98)
- According to Canton and Webbink (2002) deregulation of student selection (and fee policy) could encourage diversification among institutes
- A national entry test can provide clear expectations about the standards required for entry and avoids situations of favouritism (OECD, 2008b)

Note: selection is not intended to compensate for deficiencies in previous education, such as language/arithmetic, lack of subject clusters / related transfers *MBO – HBO*.

II. Arguments against selection

1. The Netherlands already selects in secondary education

- For example: each year, 13–15% of students successfully complete *VWO*, the same percentage as that of the cohort selected for admission to the University of California. This 15%, for that matter, is still subjected to some form of selection (Adriaansens, 2005).
- The secondary school populations have already been selected to an extent that precludes the design of any effective selection system (Drenth, 2004).

2. Selection may have negative consequences on socio-economic cohesion

- Selection (especially early selection through “early tracking”) increases the role of socio-economic status on the final education level and labour outcomes (Brunello and Cecchi, 2007)
- Early selection has a statistically significant negative effect on participation and completion of higher education in the Netherlands (Van Elk et al., 2009)
- Earlier studies conducted in the United States suggest that early tracking has a negative impact on achievement for students in the lower tracks but positive for students in upper track classes. In other words “de-tracking” would come at the expense of students in upper track classes (Argys et al., 1996)

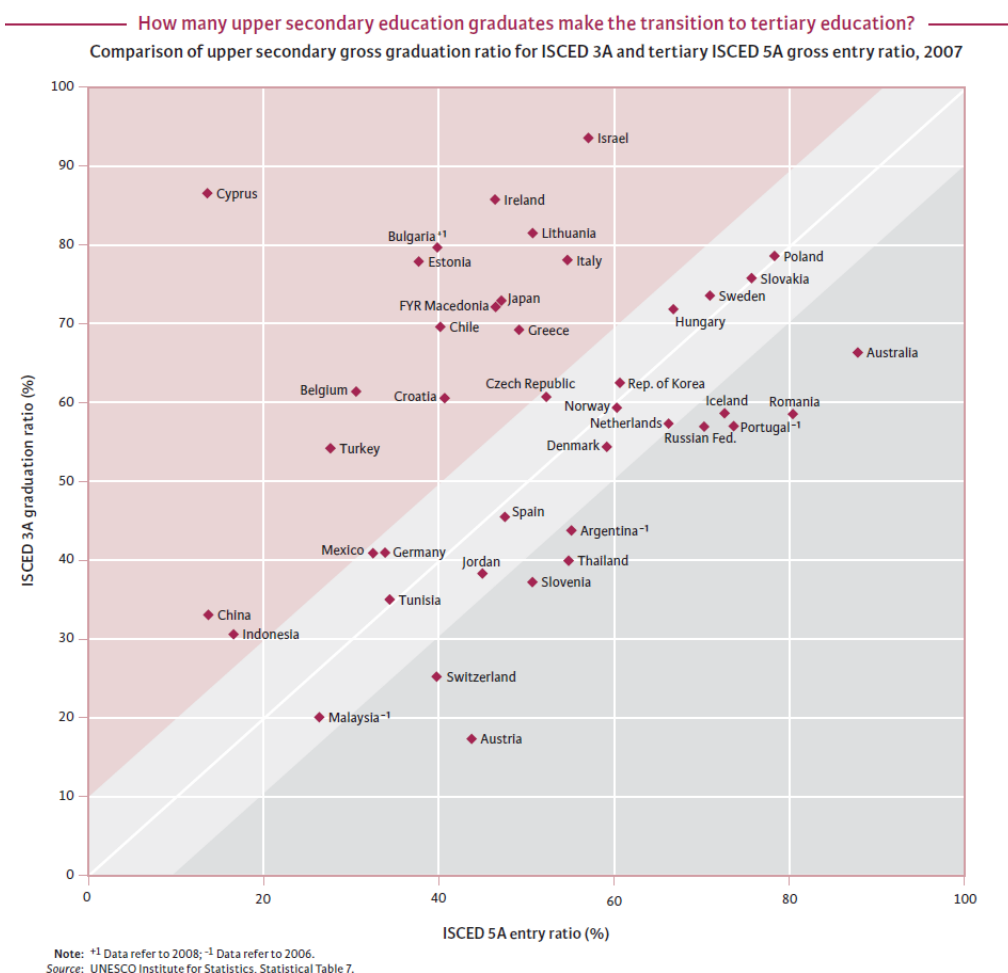
¹ It should be noted that this argument does not take into account issues of social cohesion, which are also important. Moreover, the points emphasised by the literature and listed here do not address possible different tracking criteria, namely (a) subject tracking, (b) orientation tracking and (c) level tracking. The latter is currently not part of the Dutch tracking process

- Unregulated institutional student selection (i.e. where the institution alone decides), selection can create favouritisms especially if undesirable selection criteria emerge, such as ability to pay (OECD, 2008b)

3. Supplementary exam / test has no predictive value

- The predictive value of a supplementary cognitive test is an illusion. Exam marks are more reliable (albeit still modest) predictors of educational performance, let alone professional success or career development (Drenth, 2004).
- There are no sound methods to assess attitude to work, commitment and drive. Study motivation is not a lasting, stable factor but highly dependent on situative motives and influences, generally arising only after enrolment (Drenth, 2004).
- Up to now, individual qualities are the worst predictors of educational achievement (Adriaansens, 2005).
- In most cases, selection *after* admission appears to be a better predictor than selection *before* admission (Korthals 2006, p. 12). This is confirmed by a study conducted by Mellenbergh (UvA), which demonstrates that *past performance* (first exam after about three months) in higher education is a better predictor than the results of personality questionnaires or final exam marks.
- Early selection is more advantageous for educational attainment than later selection. International comparative empirical research on “early tracking” suggests that an additional year spent in a track raises average performance (as measured by International Adult Literacy Survey) by over 3% (Ariga and Brunello, 2007; Duflo et al., 2008). Thus, introducing a tertiary education pre-entry selection (i.e. after the tracking in secondary education has taken place) might not add any value
- Data suggest that a more selective system does not necessarily yield higher graduation rates than less selective systems (see for example the case of the U.S., below). The OECD (OECD 2008b, pp. 51 ff.) describes the selection procedures in certain countries. It shows the procedural differences relating to (a) who decides the number of students entering individual public institutions of higher learning (b) who decides the admission requirements and (c) who decides on student selection proceduresⁱⁱ. For example, the following five systems differ in their selectivity:
 - Chile: higher education institutions have a large say in deciding minimum admission requirements and student selection procedures.
 - Enrolment rate: 52% (data for year 2007)
 - Graduation ratio: 15%(data for year 2007)
 - Finland: the government decides minimum admission requirements but higher education institutions decide on student selection procedures
 - Enrolment rate: 94% (data for year 2007)
 - Graduation ratio: 56% (data for year 2006)
 - Japan: higher education institutions decide minimum admission requirements in accordance with national criteria and they also decide autonomously student selection procedures
 - Enrolment rate: 58% (data for year 2007)
 - Graduation ratio: 40% (data for year 2007)
 - The Netherlands: the government decides minimum admission requirements and there is no selection procedures (except numerus clausus and the option of decentralised selection)
 - Enrolment rate: 60% (data for year 2007)
 - Graduation ratio: 47% (data for year 2007)
 - The United States: higher education institutions are autonomous in selecting their students and have different requirements. Standardised tests (such as the Scholastic Aptitude Test) are used extensively in selection procedures. The United States is, thus, a good example of a “selective system”
 - Enrolment rate: 82% (data for year 2007)

- Graduation ratio: 35% (data for year 2006)
- Selection might reduce the chances of entry into tertiary education. Data suggest that in more than one-third of the 41 countries presented in the Global Education Digest 2009, including the Netherlands, (UNESCO 2009, p. 21, and see Chart 1 below), a student has almost the same chance of beginning a tertiary programme as graduating from upper secondary education (in the Netherlands ISCED 3A graduation Ratio is 57% and ISCED 5A Gross Entry Ratio is 60%). In other countries, including Chile (ISCED 3A graduation Ratio 70% and ISCED 5A Gross Entry Ratio 40%) and Japan (ISCED 3A graduation Ratio 73% and ISCED 5A Gross Entry Ratio 47%), only about 50% of the people who are qualified to pursue their education do so. According to *[Ibid]*, this is related also (but not exclusively) to selection (e.g. university entry exams). However, these data should be taken with caution. Differences have more to do with biases in the indicators rather than with the effect of selection on educational participation and attainment. The position of the Netherlands, for example, is largely due to the fact that pupils are selected before level ISCED 3A. Countries such as Belgium appear unlikely outliers.



Comparison of ISCED 3A Graduation Ratio and ISCED 5A Entry Ratio. Taken from UNESCO, 2009, p.21

4. Significant increase in outcomes only possible with very strict selection

- Considering the selection that takes place in Dutch secondary education and the inadequate selection instruments this leaves, a substantial improvement in outcomes can only be realised by wrongly rejecting large groups of students, who would have succeeded if they had been admitted (Drenth, 2004).

- Experiences with selection within the framework of *Ruim Baan voor Talent* [Room for Talent] show that it is difficult to develop selection instruments that admit all students with a good chance of success rather than only the best; thus, it is difficult to prevent that too many students are wrongly rejected (Korthals 2006, p. 8).

5. The problem is the organisation of the programmes rather than the influx from secondary education

- The quality of students leaving secondary education has not demonstrably deteriorated. A different organisation of (academic) bachelor's programmes will create opportunities for a considerably more effective and fair form of "implicit selection". The *liberal arts and sciences model* and small-scale organisation of mass programmes in *colleges* will, in fact, turn selection into a form of matching between the objectives of the programme and the intentions of the student (Adriaansens, 2005).

6. Selection is a stealthy way to screen off a professional group

- From the perspective of some (for example, [para] medical) professions, selection is (also) intended to screen off the professional group.

III. “No tertiary programme without selective admission”: risks and limiting conditions

Considering the expected positive effects of selection, the point of departure for higher education in the Netherlands is: *no tertiary programme without selective admission*, or: all programmes are entitled to selection.

This paragraph discusses the question of whether the risks and/or any adverse effects may be counteracted by creating the right limiting conditions upon the introduction of selection.

Risks	Limiting conditions (flanking policy)
Accessibility	
<p>Dichotomy in education; reputation damage for programmes enforcing less strict selection (second-rate education).</p> <p>Selection is used to skim off the best students instead of improving education across the board.</p>	<ul style="list-style-type: none"> - In part unavoidable but to a limited extent if the generic quality is strictly monitored across the full spectrum and programmes are up to par from an international perspective (at least corresponding to the average). - Bolster diversity between institutions and programmes. Sharpening the profiles of institutions/programmes will increase the options for students and improve the chances of a proper match.
<p>Loss of a proportion of the student population who cannot meet the new requirements and/or have no other options.</p>	<ul style="list-style-type: none"> - Selection across the full spectrum of higher education should not be allowed.
Injustice	
<p>Selection instruments are unreliable.</p>	<ul style="list-style-type: none"> - Controlled experiments, Urlings-style, in programmes other than medicine. - Gradual introduction, only in sectors where effectiveness has been proven under comparable circumstances. - Careful implementation: choice of selection method to depend on purpose of selection.
<p>Perhaps not the very best but good students and students who have a good chance are rejected without reason.</p>	<ul style="list-style-type: none"> - Strict forms of selection to be allowed to a highly limited extent?
<p>Selection based solely on academic merit increases family costs² and, thus, reinforces socio-economic inequalities (this is the case, for example, in Korea, see OECD 2008b, p. 53)</p>	<ul style="list-style-type: none"> - Do not base selection exclusively on academic merit, but also on other criteria
Administrative burdens and transparency	
<p>100% de-centralised selection will cause organisational problems.</p>	<ul style="list-style-type: none"> - Gradual introduction. - National co-ordination, either by the government or by joint institutions.
<p>Non-transparency: students do not know where they stand.</p>	<ul style="list-style-type: none"> - Selection requirements to be publicised at least three years prior to final exam.

² ‘Merit’ at the time of entrance into tertiary education is not only the result of intellectual ability and study effort, but also the consequence, for instance, of the access to good schools and stimulating teachers.”

	- Optimum and timely provision of information.
Considerable increase in (administrative) burdens for students but especially for the institutions.	- Learning from best practices: from current experiences, from one another, from other countries.
At odds with the aim of broad(er) programmes.	- Selection also takes place at broad programmes.

Literature

Adriaansens, H.P.M. (2005), *Selectie als second best*, in *Thema*, 2005 no. 4.

Argys, L., D. Rees, and D. Brewer (1996). Detracking America's schools: equity at zero cost? *Journal of Policy Analysis and Management*. Vol. 15, no. 4, pp. 623-645. At: <http://www.jstor.org/stable/pdfplus/3326053.pdf>. Accessed January 8, 2010

Ariga, K. and G. Brunello (2007). Does secondary school tracking affect performance? Evidence from IALS. *KIER Discussion Paper 630*. At: <http://www.kier.kyoto-u.ac.jp/DP/DP630.pdf>. Accessed January 8, 2010. [Also referred to as: *IZA Discussion Paper 2643*. At: <http://ftp.iza.org/dp2643.pdf>. Accessed January 8, 2010]

Brunello, G. and D. Checchi (2007). Does tracking affect equality of opportunity? New International Evidence. *Economic Policy*. Vol. 52, pp. 781-861

Canton, E. and Webbink, D. (2002). The Dutch education system: Options for institutional reform. The Hague: Centraal Planbureau (CPB) [Netherlands Bureau for Economic Policy Analysis]. At: http://www.cpb.nl/nl/pub/cpbreeksen/cpbreport/2002_2/s2_1.pdf. Accessed January 8, 2010

Dooge, W. (2005), *Selectie aan de poort loont!*, in *Thema*, 2005 no. 4.

Drenth, P.J.D. (2004), *Selectie aan de poort van het Hoger Onderwijs*, in *Thema*, 2004, no. 4.

Duflo, E., P. Dupas and M. Kremer, 2008, Peer effects and the impact of tracking: Evidence from a Randomized Evaluation in Kenya, *NBER Working Paper 14475*. At: <http://ipl.econ.duke.edu/bread/papers/0809conf/Dupas.pdf>. Accessed January 8, 2010

Korthals, B. (2006), *Tussenrapportage 2006*, Commissie Ruim Baan voor Talent, the Hague, December 2006.

Korthals, B. (2007), *Wegen voor talent*, final report by Commissie Ruim Baan voor Talent, the Hague, December 2007.

OECD (2008a). Tertiary Education for the Knowledge Society. Vol. 1.

OECD (2008b). Tertiary Education for the Knowledge Society. Vol. 2.

UNESCO Institute for Statistics (2009). Global Education Digest 2009. Comparing Education Statistics across the World 2009. At: http://www.uis.unesco.org/template/pdf/ged/2009/GED_2009_EN.pdf Accessed January 8, 2010

Urlings-Strop et al. (2009), *Med. Educ.*, 43:175-183, 2009 (in ScG25-11-2009).

VSNU (2008), letter on *Doorstroom hbo-propedeuse wo-bachelor* to Minister of OCW, 5 November 2008.

Warps (2009), *Studiekeuze en studiesucces*, ResearchNed Nijmegen.

Webbink, D., de Wolf, I. [Inspectie van het Onderwijs], Woessmann, L. [Universiteit van München], van Elk, R., Minne, B., and van der Steeg, M. (2009). Wat is bekend over de effecten van kenmerken van onderwijsstelsels? Een literatuurstudie The Hague: Centraal Planbureau (CPB) [Netherlands Bureau for Economic Policy Analysis]. At: <http://www.cpb.nl/nl/pub/cpbreeksen/document/187/doc187.pdf>. Accessed January 8, 2010

A list of other studies about different forms of student tracking and its consequences can be found, inter alia in Bartlett, W. (2009). The Effectiveness of Vocational Education in Promoting Equity and Occupational Mobility amongst Young People. *Economic Annals*. Vol. 54, No. 180, January–March 2009. At: <http://betawww2.lse.ac.uk/europeanInstitute/Research/LSEE/PDF%20Files/Latest%20Research/2009item8bartlett.pdf>. Accessed January 8, 2010

ⁱ Where more vocationally-oriented institutions are absent

ⁱⁱ When there are more applicants than places