

### 3 Reactie Jaap Scheerens

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An essay on efficiency in education is badly needed in the Netherlands, where we have a lot of evaluations and assessments, but very few studies relating outcomes to (monetary) inputs. The conceptualization of efficiency as either less costly input with a stable level of output, or more/better output with fewer (or the same) input costs is quite helpful to structure the discussion. Within the education province the first interpretation (lower costs, similar output) is far less considered than the second, of improving outcomes, while the costs of bringing this about hardly ever enter the debate. The second interpretation (output efficiency) is quite prominent in recent educational policy with a strong focus of improving student outcomes in basic subjects. I will center my comments on three topics: ways to lower input costs that may not be detrimental to outcome levels, ways to improve outcomes that are relatively cost neutral and thirdly, some more specific comments on the way the author discusses accountability policies. Before that, I would like to raise two conceptual issues. Firstly, I wonder whether the concept of cost effectiveness, as, for example applied by Henry Levin, should not be used more explicitly in the paper. Cost effectiveness ratios, applied to education, compare inputs or treatments using gain in educational output as the denominator and the numerator is the cost associated with delivering the input or treatment in question. In this way alternative treatments (e.g. reducing class size compared to providing high quality text books) treatments can be compared on their effectiveness while taking costs into consideration. The second conceptual question I have is why “throughput” and malleable processes or “educational treatments” are not differentiated from inputs. Economic research concerning educational productivity has often concentrated on inputs like class size, teachers’ qualification, per student expenditure and teacher salaries, and not addressed process indicators like opportunity to learn, active teaching, and supportive organizational conditions at school and classroom level. Particularly when “output efficiency” is at stake it seems strange to give no place to “throughput” variables at school level that generally show higher effect sizes than the ones that are cited in Hanushek’s table in the paper.

#### **Input efficiency: producing the same outputs with fewer inputs**

I was surprised to find no proposals for increasing efficiency by spending less on certain issues. The reasoning put forward in the paper is that, given the high returns on human capital, cost reduction might work out as an example of being “penny wise pound foolish”. Closing off a potential area of innovative contributions from economists in education with a corny way of saying like this, is disappointing. In economist’s terms some high cost resource inputs in education, like class size have low elasticity, meaning that high increments on the input produce small or even negligible gains in output. Of course it would take some courage to draw attention to the likely absence of output loss when average class size would be increased by one or two pupils. If even economists are shying away from drawing attention to possible input inefficiencies, than whom else would be expected to do so? In the way the Dutch educational system is structured administration costs and managerial overhead deserve a second look, not to speak of the super inefficient way of bottom up school improvement, where millions are spent on re-inventing the wheel, nor of the billion EURO that is annually spent on special subsidies and an educational support structure that has never been evaluated for its effectiveness.

#### **Output efficiency: producing more output with the same inputs**

The author is quite pessimistic about the available knowledge on “what works” in education. His analysis appears to be based on a frame of reference that seems rather limited (two less successful intervention studies, mentioned on page 10). Quite in line with the blind spot concerning malleable process factors in education at school level, as noted in the above, the author ignores studies in educational effectiveness and the knowledge base that has been established in this field. Authors like Walberg and Hattie, have produced reviews, based on hundreds of meta-analyses (Walberg, 1985, Hattie, 2009). Increasingly these meta-analyses are not just based

on observational studies, but draw more and more also on randomized experiments, of the kind that the author is (rightly) proposing as a constructive way ahead. Robust factors from educational effectiveness research have been used for evidence based programs, in the United States and elsewhere, (known under the heading of Comprehensive School Reform programs), and are showing modest but educationally relevant results (cf Borman et al. 2003). Educational innovation policy in the Netherlands would gain in efficiency if such type of programs were used more often.

The author is almost as prudent and cautious as it comes to his assessment of what we know to improve educational performance, as he showed himself with respect to seeing opportunity for efficiency gain on the basis of input reduction. His caution on “what works” research is warranted to a degree, as indeed, most results and meta-analyses still depend on observational studies, and results of meta-analyses show highly diverging mean effect sizes (Scheerens, 2012). Yet, levers for performance improvement exist, not just as system level measures, such as school choice and accountability policies, but also at school and classroom level. Different capacities of schools and teachers to provide opportunity to learn, to make good use of performance feedback and provide “focused” teaching, based on enacted “pedagogical content knowledge” of teachers are some examples of promising strategies.

### **Smart accountability policies and a learning strategy for educational policy**

Smart accountability policies, according to Dinand Webbink, should prevent negative side effects, such as strategic behavior by schools, by means of control from the Inspectorate, in preventing schools to display this behavior. It is questionable whether more rigorous external control would solve the problem. With regards to the Netherlands, external school accountability exists, but is less “high stakes” than in the many examples that we get from the USA. In a recent presentation Helen Ladd spoke favorable about the mixed arrangements for school accountability in the Netherlands, including examination and test results, but connected to school inspection, in comparison to high stakes testing in the No Child Left Behind program (Ladd, 2012). More generally, combination of external and “internal” school accountability, (cf Carnoy et al., 2003), including formative assessment, might be more effective than just more external control.

Step wise policy formation, accompanied by rigorous research, is a very good recommendation. In order to learn most from such a strategy, it would be important that even the initial trials could benefit from already available evidence, in other words, that explicit programs would be tried out as treatments. Otherwise, true experiments evaluating ad hoc and “black box” programs would not produce much learning for educational policy. Unfortunately this strategy does not combine well with the predominant bottom up school improvement philosophy in the Netherlands: The evidence based way of policy formation, the approach of “reforms as experiments” is hard to reconcile with a development strategy in which there is no place for externally shaped “treatments”.

### **References**

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