A GUIDE TO VISIBLE LEARNING

VISIBLE LEARNING IN THEORY AND PRACTICE
003 • INTRODUCTION

006 • 1: WHAT IS VISIBLE LEARNING?
from 10 Mindframes for Visible Learning: Teaching for Success

010 • 2: INSIGHTS INTO VISIBLE LEARNING
from Visible Learning Insights

023 • 3: I AM AN EVALUATOR OF MY IMPACT ON STUDENT LEARNING
from 10 Mindframes for Visible Learning: Teaching for Success

034 • 4: IS THERE A PURPOSE OF EDUCATION?
from The Purposes of Education: A Conversation Between John Hattie and Steen Nepper Larsen
This guide is for teachers and senior leaders who are new to the Visible Learning concept or would like to refresh their knowledge. Containing a curated collection of chapters from books within the series, it introduces some of the most important features that will help teachers to see the effects of what they do in the classroom so that they can increase their impact and make a real difference to their students.

CHAPTER 1 – WHAT IS VISIBLE LEARNING?

This chapter provides an overview of the Visible Learning project, the culmination of over 30 years work, synthesizing over 95,000 studies involving more than 300 million students globally that explains the most significant evidence-based ideas about what actually works in schools and is. Taken from 10 Mindframes for Visible Learning, it defines the ten behaviours or mindframes that teachers need to adopt in order to maximize student success.

CHAPTER 2 – INSIGHTS INTO VISIBLE LEARNING

This chapter, taken from Visible Learning Insights introduces the main features of the book Visible Learning and its ten-year history. After reading this chapter you should be able to answer the following questions:

- What is the research process used in Visible Learning?
- What is a meta-analysis?
- What is an effect size?
- What is the size of the data pool?
- How is Visible Learning structured?
- What is important when interpreting factors?

CHAPTER 3 – I AM AN EVALUATOR OF MY IMPACT ON STUDENT LEARNING

Taken from 10 Mindframes for Visible Learning, this chapter discusses educational expertise and how it is shown. One of the most crucial questions is whether teachers want to know about their impact and make it visible. Teachers who have set themselves this goal and are consistently trying to implement it are fundamentally different from teachers who do not ask themselves this question. “Visible Learning” and “Know thy impact” become the core message of this mindframe – and the core message of this book.
CHAPTER 4 – IS THERE A PURPOSE OF EDUCATION?


Please note that because this FreeBook is composed of excerpts from several Visible Learning books, you may see references to other books or chapters. To delve deeper into any of the ideas or concepts laid out in these chapters, use the discount code JKL20 to get 20% off your order at www.routledge.com

Some references from the original chapters have not been included in this text. For a fully referenced version of each chapter, including footnotes, bibliographies, and endnotes, please see the published title.

As you read through this FreeBook, you will notice that some excerpts reference previous chapters – please note that these are references to the original text and not the FreeBook.
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CHAPTER 1

WHAT IS VISIBLE LEARNING?

This chapter is excerpted from
10 Mindframes for Visible Learning: Teaching for Success
By John Hattie and Klaus Zierer
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WHAT IS VISIBLE LEARNING?

The work on the original Visible Learning meta-study took more than 15 to 20 years to complete. It involved analysing more than 800 meta-analyses composing around 80,000 studies in which an estimated (because the number of test subjects is not always stated in the meta-analyses) 250 million learners took part – and, as just noted, the work on the Visible Learning project is not yet finished: A total of more than 1,400 meta-analyses now have been analyzed to date, but little has changed about the main messages of the study.

Only meta-analyses relating the achievement outcomes are considered. Others are doing similar work with respect to emotional and motivational outcomes (Korpershoek et al., 2016), how we teach (Hattie & Donoghue, 2016), and special education students (Mitchell, 2014), and it would be wonderful if there were meta-syntheses on retention to the last years of schooling, and physical and nutritional outcomes.

Visible Learning seeks to get to the crux of this multitude of findings from educational research and identify the main messages by synthesizing meta-analyses. The aim is to move from “what works” to “what works best” and when, for whom, and why. The search to understand these moderators (when, whom, why) was key in the search, and that there were so few moderators was quite surprising. The search involved first generating around 150 factors from the underlying meta-analyses, such as “class size,” “teacher-student relationships,” “direct instruction,” and “feedback,” and then determining their effect size, which can be calculated via comparing the averages of two conditions (e.g. a new vs. older curriculum, reducing class size from 25–30 to 15–20) or by comparing students over time after some intervention. The beauty of effect sizes is that, once computed, they can be reasonably compared across many interventions. There are many excellent sources for understanding effect sizes (Coe, 2012; Lipsey & Wilson, 2001). Like every other method, meta-analyses – and especially the innovative attempt in Visible Learning to construct a synthesis of meta-analyses – are, of course, not without their flaws, and it is, therefore, important to refer to some of these criticisms (cf. Snook et al., 2009; Zierer, 2016b).

The various influences generated from the multiple meta-analyses can be assigned to various domains: learners, family, school, teacher, curriculum, and teaching. The table below provides a summary of the procedure as a whole.
This summary already reveals an important finding: There are domains that have been the topic of much research, such as teaching, and domains that have been the topic of fewer research syntheses, such as family. As important, there can be great variation in the dispersion of effect sizes within the domains: Whereas most of the factors in the domain of school, for instance, are clustered around an effect size of 0.2, the factors in the domain of teacher achieve effect sizes between 0.12 (“teacher education”) and 0.90 (“teacher credibility”). Understanding this variance is important to building the case for the importance of teacher mind frames as one of the critical underlying factors underlying these many influences.

Across the 800 meta-analyses included in the meta-study, the variability of the effects can be shown in the following distribution (see Figure 1).

<table>
<thead>
<tr>
<th>FACTORS</th>
<th>META-ANALYSES</th>
<th>STUDIES</th>
<th>OVERALL EFFECT SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learners</td>
<td>19</td>
<td>152</td>
<td>11,909</td>
</tr>
<tr>
<td>Family</td>
<td>7</td>
<td>40</td>
<td>2,347</td>
</tr>
<tr>
<td>School</td>
<td>32</td>
<td>115</td>
<td>4,688</td>
</tr>
<tr>
<td>Teacher</td>
<td>12</td>
<td>41</td>
<td>2,452</td>
</tr>
<tr>
<td>Curriculum</td>
<td>25</td>
<td>135</td>
<td>10,129</td>
</tr>
<tr>
<td>Teaching</td>
<td>55</td>
<td>412</td>
<td>28,642</td>
</tr>
</tbody>
</table>

Table 1.1
In many ways, this distribution shows that practically everything that happens in school and the classroom can lead to an increase in academic performance. To put it another way, 90 to 95 percent of what we do to learners increases their achievement. One might think that this would reassure us teachers, but that is not the case. The only thing this result illustrates is that people are learning all the time – sometimes despite us. This helps explain why almost everyone can claim “evidence” for their favourite influence. In many senses, you cannot prevent learning.

The key notion, however, is that we should be asking about the story underlying those influences greater than the average effect compared with those influences below the average effect (but still positive). This is the Visible Learning story and has been well rehearsed in other Visible Learning books and not recited here. The question this book addresses is related to the one big critical idea underlying success in making a difference to the learning lives of students – the mindframes of the educators.
This chapter is excerpted from Visible Learning Insights
By John Hattie and Klaus Zierer
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THE VISIBLE LEARNING STORY
INSIGHTS INTO VISIBLE LEARNING
John Hattie and Klaus Zierer

REFLECTIVE TASK

Reflect on what you already know about Visible Learning: What is your impression of the book? Is it old wine in new skins? Do you see it as an enrichment? Are you entirely unfamiliar with it? Or does it make you angry?

GOALS AND CONTENT

This chapter introduces the main features of the book Visible Learning and its ten-year history. First, the methodical approach is discussed, before the book’s systematic is explained and some initial insights inferred. When you have read this chapter, you should be able to answer the following questions:

- What is the research process used in Visible Learning?
- What is a meta-analysis?
- What is an effect size?
- What is the size of the data pool?
- How is Visible Learning structured?
- What is important when interpreting factors?

Although meta-analysis is a well-known and used tool in medicine, its use across educational sciences is less well known – even though it was invented by an educationalist! It is a quantitative-empirical research method, just like observation, survey, testing, etc. Unlike most research methods, meta-analysis does not deliver any new data but works with existing data. There are existing data (primary studies), re-analyses of existing data (secondary studies), and synthesis of many existing data studies (meta-analysis). Meta-analysis is therefore used primarily in cases where a problem has already been researched extensively and a number of quantitative-empirical results are available. Quite often, these results do not necessarily agree with one another, so that the question arises: Which of the many primary studies is correct? This is exactly where meta-analysis starts: Its goal is to convert this multitude of primary quantitative-empirical studies into one result; but it is just as important to understand the factors which can moderate or influence this overall “one result”. In other words, it is about the general message that may be derived from the many primary studies.
DEFINITION OF A META-ANALYSIS

A meta-analysis is a combination of existing primary studies on a particular problem and a clarification of the differences among their results.

In light of the knowledge expansion in all areas of science, the significance of meta-analysis is likely to grow in the future. In educational science, for instance, the number of published articles and doctorates has steadily increased in recent years, so there is no lack of knowledge about education and teaching. What is missing is an overview and systematization of the results of primary studies. This is precisely why meta-analysis was developed.

Meta-analyses have a longer tradition in English educational science. When Visible Learning was published in 2008, already 15 years of work were invested – collecting, viewing, and evaluating about 800 meta-analyses during that time. These meta-analyses themselves included over 50,000 primary studies, in which an estimated 200 million learners participated. At that time Visible Learning already comprised (some have claimed) the largest database of empirical educational research ever evaluated in a study. Since then, several years have passed and work on the extension and above all on updating the data set has continued. When Visible Learning for Teachers was published in 2013, there were already over 900 meta-analyses and, in 2017, the last update was published under Visible Learning plus, based on over 1,400 meta-analyses, which combine over 80,000 primary studies and the performance results of an estimated 300 million learners (Table 2.1).

In order to put the insights included in Visible Learning in the proper context, it is necessary to point out the advantages and disadvantages of meta-analysis. Table 2.1 summarizes the most important aspects.

At this point we should remember that every research method has its advantages and disadvantages, and its benefits must be judged with a view to the declared goal. The pros and cons of meta-analysis mentioned above should be considered with this in mind.

In order to answer the question of what general messages can be gleaned from the many primary studies, a meta-analysis must make the primary studies comparable. To do so, it uses the statistic measure of effect size – usually abbreviated with the letter d.
THE VISIBLE LEARNING STORY
INSIGHTS INTO VISIBLE LEARNING
John Hattie and Klaus Zierer

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Numbers metas</td>
<td>816</td>
<td>931</td>
</tr>
<tr>
<td>Numbers studies</td>
<td>52,649</td>
<td>60,167</td>
</tr>
<tr>
<td>Numbers learners</td>
<td>ca. 200 million</td>
<td>ca. 240 million</td>
</tr>
</tbody>
</table>

Table 2.1

<table>
<thead>
<tr>
<th>ADVANTAGES</th>
<th>DISADVANTAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary of several primary studies</td>
<td>Problem of different quality standards of primary studies with regard to sample and study design</td>
</tr>
<tr>
<td>Increased reliability (validity)</td>
<td>Problem of differences between published and unpublished research results (grey literature problem)</td>
</tr>
<tr>
<td>Clarification of the differences among results (variance)</td>
<td>Problem of comparability of research results due to theoretical or cultural differences</td>
</tr>
</tbody>
</table>

Table 2.2

For example, a meta-analysis might examine the impact of class size on learners’ mathematical achievements. To that end, a trial group is reduced in size (e.g., class size of 15) while a matching control group remains unchanged (e.g., class size of 30). The effects of these students in these two class groups may then be compared. Or, we could have one class of 30 divided into two classes of 15, and the difference between pre- and post-tests of the learners’ mathematical skills before and then four weeks after the class reduction can be calculated. Let us suppose that the smaller group scored an average of 60 points in the pre-test and an average of 65 points in the post-test. Now we take those values and compare them to the values of the control group, which also scored an average of 60 points in the pre-test and an average of 62 points in the post-test. Since the achievement gain of the trial group is higher than that of the control group, this indicates that there is a connection between the reduction in class size and the students’ mathematical achievement.
DEFINITION OF EFFECT SIZE

Effect size is a statistical measure to denote the magnitude of the effect between two groups, or between a pre- and post-group average.

It would be premature, however, to conclude that the intervention is more effective based merely on the difference in the average achievement gain of the two groups. There can be many factors influencing this average, for example, if some students are having a bad day when taking the test. To make these differences comparable with other studies on class size, or with the many other influences, we need to standardize these differences – and we do this by dividing the difference by a measure of how spread out the students are in these two classes (called pooled standard deviation).

In our example, the standard deviation of the trial group is 12 points and that of the control group is 14 points (Table 2.3).

<table>
<thead>
<tr>
<th></th>
<th>TRIAL GROUP</th>
<th>CONTROL GROUP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>60 points</td>
<td>60 points</td>
</tr>
<tr>
<td>Post-test</td>
<td>65 points</td>
<td>62 points</td>
</tr>
<tr>
<td>Achievement gain</td>
<td>5 points</td>
<td>2 points</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>12 points</td>
<td>14 points</td>
</tr>
</tbody>
</table>

Table 2.3

With this data and reasoning we can now calculate the effect size that is so crucial to "Visible Learning". We note the pre-test scores are the same for the two groups, so use the post-test difference as our measure of effect:

Effect size \(d\) = \((\text{Achievement gain Trial group} - \text{Achievement gain Control group})/\text{Average standard deviation}\)

\[d = (5-2)/13 = 3/13 = 0.23\]

With this calculation of effect size, they can be positive as well as negative values. A positive value means that the examined factor contributes to an increase in student achievement. A negative value means that the factor leads to a decline in student achievement. But we still need to ask: What exactly does 0.23 mean?
To solve this problem, “Visible Learning” starts from this classification and sums up all effect sizes found in more than 1,400 meta-analyses across 250 influences (of which class size is one). Figure 3.1 shows the result graphically.

Looking at this result against the background of positive effects, it may be said that 95 percent of all influences are positive. In this respect, almost everything that happens in schools promotes school performance. This could reassure teachers, but it should not (if, for no other reason, this means that everyone’s ideas of how to improve schools can be defended, as they almost all work!).

Against this background we oppose this interpretation of using any positive influence as therefore worthwhile and propose to set the hinge-point differently, namely at the average of all possible influences, which is 0.4. Why 0.4? This value represents the average of all measured effect sizes for “Visible Learning”; anything above this average we call the range of “desired effects”. Our claim is simple: Being better than zero is trivial; it is more convincing to be better than average.

Another implication is that across these studies, about half of the teachers already meet this requirement. Therefore, we do not need to discover new ways of learning and teaching. Expertise is already all around us – probably at every school, in every place, in every country, all over the world. What is important is to make this expertise visible, to take it as an occasion for discussion, and to use it to upscale what is already being done well.
This shift of the zero point to 0.4 is supported when one considers that the human being makes learning progress through aging alone. We get smarter, even if we never go to school, simply by experiencing more dilemmas, problems, and people. These are called “development effects” and have effect sizes between 0 and 0.2. When we look at the effects relating to the typical teacher, these effects range between 0.0 and 0.4, which is why these values may be described as normal “school attendance effects”. Any effects above 0.4 are deemed desirable – but we still have to be careful with these descriptors, as small effects can sometimes lead to important questions that help us understand why they are low and then how to improve them (e.g., asking why the effects of class size are so low), and sometimes big effects could be on very narrow measures (e.g., increasing vocabulary scores). Negative values, which appear particularly problematic but rarely occur, are defined as “inverse effects”.

The Visible Learning Barometer shown in Figure 2.2 illustrates what has been discussed. The fictitious example above of reducing class size, to finish that thought, has thus far only achieved an effect of \( d = 0.23 \), which is relatively small, and, in light of the associated costs, such an intervention would have to be carefully considered before being implemented. In fact, as you can see from the barometer, in “Visible Learning” the effect size for reducing class size across 4 meta-analyses and 113 studies was calculated as 0.14. How does this effect size come about?

![Figure 2.2 Class size](image-url)
There are several ways to combine the effect sizes of several meta-analyses. In *Visible Learning* from 2008 a simple average was taken: For each factor, the mean value was simply taken across all meta-analyses. A number of researchers criticized the fact that smaller meta-analyses (i.e., meta-analyses with a small data set of primary studies) were taken into account just as much as larger meta-analyses (i.e., meta-analyses with a large data set of primary studies). This could undoubtedly distort the overall effect (e.g., if the large meta-analysis produces significantly different results than the smaller meta-analysis). They therefore proposed, similar to the primary studies themselves, a weighting of the meta-analyses. So, the meta-analyses are weighted according to the number of individual studies included. The overview in Table 3.4 shows results for the discussed example of reducing class size.

The difference is easy to see: The overall effect is calculated solely from the mean value of the meta-analyses (using the formula $d = 1/N \sum d$) and gives an effect size of 0.21. Taking into account the number of primary studies in each meta-analysis (using the formula $d = \frac{\sum (N_i d_i)}{\sum N_i}$), this results in an effect size of 0.14 (because the meta-analysis by Glass and Smith (1997) with 77 primary studies is larger and thus contributes more to lowering the effect from the simple average). Statistically speaking, this weighted method is more precise, which is why it is used in this book to take up criticism and represent a further development of “Visible Learning”.

<table>
<thead>
<tr>
<th>METAS</th>
<th>YEAR OF PUBLICATION</th>
<th>N STUDIES</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass &amp; Smith</td>
<td>1997</td>
<td>77</td>
<td>0.09</td>
</tr>
<tr>
<td>McGiverin et al.</td>
<td>1999</td>
<td>10</td>
<td>0.34</td>
</tr>
<tr>
<td>Goldstein et al.</td>
<td>2000</td>
<td>9</td>
<td>0.20</td>
</tr>
<tr>
<td>Shin &amp; Chung</td>
<td>2009</td>
<td>17</td>
<td>0.20</td>
</tr>
<tr>
<td>Unweighted Synthesis</td>
<td></td>
<td></td>
<td>0.21</td>
</tr>
<tr>
<td>Weighted Synthesis</td>
<td></td>
<td></td>
<td>0.14</td>
</tr>
</tbody>
</table>

Table 2.4
Based on these considerations, more than 1,400 meta-analyses have been collected, reviewed, and evaluated to date. Against this background (and also in contrast to classical meta-analyses), the procedure is referred to as the synthesis of meta-analyses. With the help of this combination, 255 factors may be identified and nine domains assigned – compared to approximately 800 meta-analyses, 138 factors in the 2008 book, and over 900 meta-analyses, 150 factors in the 2013 book.

The nine domains are:
1: Student with 38 factors
2: Home with 16 factors
3: School with 25 factors
4: Classroom with 24 factors
5: Curricula with 31 factors
6: Teacher with 16 factors
7: Teaching: Teaching strategies with 20 factors
8: Teaching: Implementation methods with 53 factors
9: Teaching: Learning strategies with 32 factors

This subdivision makes it possible to take a systematic look at learning outcomes. It is also aligned with the didactic triangle that has always been used in didactics to illustrate the complexity of education and upbringing.

Based on the actors of learning and teaching – “teacher”, “students”, and “curricula” – three dialogic structures may be distinguished.

First, a dialogue between teacher and learner in which the discussion about “implementation methods” is to be located. Second, a dialogue between learners and material, which deals with the question of “learning strategies”. And third, a dialogue between the teacher and the subject matter, which is primarily concerned with “teaching strategies”. It should be pointed out at this point that teaching is always embedded in a certain structure. Consequently, a multitude of other aspects in which teaching takes place have an effect on it. These include the external and internal conditions of schools, which are grouped under the heading’s “school” and “classroom”. Finally, family and social influences should be mentioned (i.e., the “home”). Figure 2.3 summarizes what has been said in a familiar way.
If you look at the data pool for these domains and compare them, “Visible Learning” already provides one important result (Table 2.5).

There are some domains that are well researched, such as “Teaching”, and others that are less well explored, such as “Teacher”. This addresses one of the advantages of meta-analyses: Meta-analyses can visualize well-researched areas as well as blind spots in a body of research.

In the introduction, we mentioned that there are a number of abridgements of “Visible Learning” to be found in public discourse.

Figure 2.3 Didactic Triangle
To avoid these abridgements, the following three steps are recommended when interpreting the factors and their effect sizes:

1. Check the indicators of the factor. In Visible Learning in 2008 a number of characteristic values in addition to the barometers are cited: Standard errors (not to be confused with the standard deviation), rank, number of meta-analyses, number of studies, number of effects, and number of persons. Not all of them are necessary for an interpretation of the results. However, the number of meta-analyses at least should be taken into consideration, because this can provide information on how broadly and intensively a factor has been researched. Frequently it is also worth taking a look at the bibliography of Visible Learning in order to examine the year of publication and the respective effect sizes in a few meta-analyses and thus to question the range of the factor. If one does this, for example, with the factor "Mainstreaming/Inclusion", one notes that eight meta-analyses are used that were published between 1980 and 2016, but they only take a brief look at a few disabilities. In view of these results and the numerous current discussions and studies in this area, the interpretation of the effect size of 0.36
makes little sense, given that so much has developed since these earlier days of inclusiveness. In addition to the number of meta-analyses and the time span of their publication, a confidence interval is given for the different effect sizes of the factors. Why? A confidence interval shows at a glance how homogeneous the results from the meta-analyses are and how exact the resulting effect size is. The standard error is used to calculate a confidence interval. For example, there are factors with a small standard error (0.04), such as “Cooperative learning”, and factors with a large standard error (0.16), such as “Worked examples”. In general, this standard error is now multiplied by 1.96 and added to or subtracted from the calculated effect size. The upper and lower limits of the confidence interval include the calculated value with a probability of 95 percent. With regard to the interpretation of a factor, the following applies: The larger the confidence interval, the more urgent it will be to take a closer look. The average confidence interval across all factors with an interval of ± 0.14 (due to the average standard error of 0.07) is used for orientation. For the reasons given above, in this book the number of meta-analyses, the year of publication of the meta-analyses, and a 95 percent confidence interval are given, in addition to the factor description and effect size.

2. Check the interpretations of the effect size for and across the factors. Once the first and second steps have been completed, you can form a meaningful interpretation. The comments on the factors in Visible Learning, Visible Learning for Teachers, 10 Mind-frames for Visible Learning, and the homepage of Visible Learning plus are particularly recommended, as they provide a differentiated and detailed account of the results of the meta-analyses.

SUMMARY

• WHAT IS THE RESEARCH PROCESS IN VISIBLE LEARNING?

Visible Learning is a synthesis of meta-analyses, which are the consequence of combining numerous primary studies.

• WHAT IS A META- ANALYSIS?

A meta-analysis is a synthesis of existing primary studies on a particular problem and a clarification of the moderators that may influence the overall findings.
• WHAT IS AN EFFECT SIZE?
An effect size is a statistical measure to denote the magnitude of the influence of a factor.

• WHAT IS THE SIZE OF THE DATA POOL?
The data pool includes over 1,400 meta-analyses, which themselves fall back on approximately 80,000 primary studies with an estimated 300 million learners. Visible Learning thus represents a large pool of empirical education and training programs.

• HOW IS VISIBLE LEARNING STRUCTURED?
Visible Learning is divided into nine domains: Student, Home, School, Classroom, Curricula, Teacher, Teaching strategies, Implementation methods, and Learning strategies. The 255 factors are assigned to these domains and the impact they have on learning success at school is described.

• WHAT IS IMPORTANT WHEN INTERPRETING FACTORS?
We recommend a three-step process consisting of consideration of the factor name, data review, and effect size interpretation. This process is intended to help avoid abridgements and premature interpretations.
CHAPTER 3

I AM AN EVALUATOR OF MY IMPACT ON STUDENT LEARNING

QUESTIONNAIRE FOR SELF-REFLECTION

This chapter is excerpted from

10 Mindframes for Visible Learning: Teaching for Success

By John Hattie and Klaus Zierer

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Assess yourself by rating your agreement with the following statements:
1 = strongly disagree, 5 = strongly agree.

I am very good at . . .
- making my impact on student learning visible.
- using methods for making my impact on student learning visible.

I know perfectly well . . .
- that student achievements make my impact visible.
- that student achievements help me to maximize my impact.

My goal is always to . . .
- evaluate my impact on student learning.
- use multiple methods of measuring student achievement to assess my impact on student learning.

I am thoroughly convinced . . .
- that I need to evaluate my impact on student learning regularly and systematically.
- that I need to use student learning to assess my impact.

VIGNETTE

Please imagine two teachers. Both prepare their lessons properly and conscientiously. While the one teacher formulates his or her central message as “I want to teach a good lesson,” the maxim of the other teacher is “I would like to make my impact on the learners visible at the end of the lesson.” Both mindframes are convincing at first glance. At second glance, however, the difference becomes clear: The first teacher will be satisfied if she or he feels at the end of the lesson that the lesson has gone well, the learners have participated well, no disturbances have interrupted the flow of the lesson, and the most important content was explained. All of this is, of course, important for the other teacher as well. But she or he will not rely on feeling and will look for evidence. As a result, at least at the end of the lesson, but probably during the lesson as well, the second teacher will have to slip into the role of the
evaluator again and again, listening instead of talking, making learning visible and showing the students what they can do now – and what they cannot. The lesson will not end without this teacher trying to make his or her influence visible by means of the students’ learning performance.

WHAT IS THIS CHAPTER ABOUT?

This vignette tries to pinpoint the core message of this mindframe: Educational expertise is shown by how teachers think about what they do. One of the most crucial questions is whether teachers want to know about their impact and make it visible. Teachers who have set themselves this goal and are consistently trying to implement it are fundamentally different from teachers who do not ask themselves this question. “Visible Learning” and “Know thy impact” become the core message of this mindframe – and the core message of this book.

After reading this chapter, you should be able to explain, in light of this core message:

• the progress from proficiency to enhanced achievement.
• the evidence of the factors “providing formative evaluation” and “response to intervention.”
• what is meant by the notion “Teachers are to DIE for.”
• how individual feedback works.

WHICH FACTORS FROM VISIBLE LEARNING SUPPORT THIS MINDFRAME?

When you walk into a classroom and say to yourself, “My job here is to evaluate my impact,” then students are the major beneficiaries. This is by far the most important of all mindframes and dominates as the major message from the Visible Learning research. Of course, this begs the moral purpose question of what we mean by impact. It also means we have to continually adjust and refine what we are doing to maximize the impact for each student, and it means we often need to stop talking and listen for our impact.

There are many forms of impact, such as a sense of belonging as a learner, the will and thrill of learning, respect for self and respect for others, higher achievement and attitudes, positive disposition, and social sensitivity. There are many ways to make
this impact visible: artefacts of student work, observation of students’ learning, tests and assignments, listening to interactions among students, and privileging student voice about their learning.

We must ensure each student progresses in his or her achievement journey across the usual school disciplines. While, of course, the topics of these disciplines can be quite different depending on country or even jurisdiction, some form of academic achievement is present in every classroom. It is not the task of this book to debate this curriculum but to be reminded of Michael Young’s [2013] claim that we often send students to school to be exposed to what they would not be exposed to if they did not go. Also, to note that most curricula are based on "adult group think": groups of adults deciding on scope and sequence of topics. Rarely is curriculum based on how students actually progress (because there is so little research on that topic). Indeed, if we lined up various curricula from different jurisdictions, it is for certain that they would differ in this scope and sequence and the choice of curricula topics – but each would be presented as the one and proper solution.

Whatever the content, the progress is the critical task we ask of teachers and students. Developing an understanding of progression can either be explicit and provided to teachers or it can be intuitive and worked through by teachers in the moment within the classroom. Given the many students in a class, the latter is more frequent, simply because learning is rarely linear and follows someone’s dictates of how learning progresses – it is more staccato, and it is likely that progression can differ depending on where each student starts.
Note the emphasis on progression to achievement. Too often, high achievement is privileged and although, of course, we all want high achievement, an overemphasis on achievement can lead to distortions in understanding the impact of educators. The relation between progress and achievement can be expressed in many ways, such as in Figure 3.1. On the x-axis we have placed growth or progress and on the y-axis, achievement. We can apply tentative labels to each of the four quadrants. Success is thus not always high achievement (who wants to be a cruising school or student) but is defined as high progress. No matter where the student starts, he or she deserves at least a year’s growth for a year’s input. And knowing that this is the focus of impact is the fundamental starting point of understanding impact.

To understand what a “year’s growth” means, we have to consult multiple sources. It can include looking at effect sizes over time, examples of student work over a year, indexing to a year’s curriculum claims – but critically understanding this growth involves conferring with other teachers. This is related to the mindframe “I collaborate with my peers and my students about my conceptions of progress and my impact.”

PROVIDING FORMATIVE EVALUATION

In Figure 3.2, the factor “providing formative evaluation” arouses interest, as it is among the most powerful factors in Visible Learning, with an effect size of 0.90.
What does formative evaluation involve, and what makes it so effective? Michael Scriven (1967) distinguishes between formative and summative evaluation of instructional processes. Whereas formative evaluation is conducted during an intervention, allowing the teacher to use the resulting data to improve the instructional process, summative evaluation is conducted at the end of the intervention and is thus an evaluation of its result. (Note that this means that there is no such notion as formative or summative assessment, as any assessment can be used to make formative evaluation [during the lesson] or summative evaluation [at the end of the lesson]. The effects on student learning will obviously be different in each case: Results from a formative evaluation can still be used to benefit the learners, whereas results from a summative evaluation serve only as feedback for the teacher – although it can be used later by learners in the next set of lessons. These characteristics show why formative evaluation is often seen as being closely related to feedback, and indeed there are many aspects in which they overlap. However, there are two important, if not to say crucial, distinctions between these factors. First, while feedback can take the form of teacher-to-student feedback or student-to-teacher feedback, formative evaluation provides feedback from the learner to the teacher: It helps the teacher modify instruction, see the effects of their teaching so far, and hints as to where to go next in their teaching. Second, while feedback focuses on all aspects of teaching, formative evaluation focuses on the goals of the learning process and seeks to determine whether the learners have reached these goals – yet. The secret to the success of a formative evaluation lies in these two distinctions. After all, it is focusing on whether learners have reached the goals or success criteria of the lessons – and it is the teacher who needs to have the competence and mindframe to seek this information and draw the right conclusions from it for the further course of the learning process. Of course, students can also use formative evaluation to tweak, change, and modify their own learning, but it is formative evaluation about and to the teacher that has the greatest impact.

**RESPONSE TO INTERVENTION**

The term “response to intervention,” “RTI” for short, originated in the United States, and refers to an approach designed especially for children and youths with learning difficulties (see Figure 3.3). It thus has its roots in special education but has since been applied to general education within the context of inclusion – with as much success. The secret to the success of the “response to intervention” factor lies in the teacher’s continuous adjustment of the lesson (intervention) and the resulting benefit...
derived from the learners [response]. It enables the teacher to continually adjust the instruction to match the current learning level of the students.

This process is organized in a so-called multilevel prevention model generally made up of three tiers: At the first tier, the teacher holds a regular lesson for all learners that meets current quality criteria. At the second tier, the teacher intervenes on behalf of the learners who were incapable of achieving the desired learning success in the first step. This support involves applying appropriate methods for measuring learning levels and is given in small groups for a set period of time. At the third tier, the teacher provides supplementary instruction for learners who did not achieve the desired learning success during the intervention on the second tier.

At this third tier, interventions generally take the form of one-on-one instruction, allowing the teacher to provide more individualized and intense support to the students who need it. Hence, the three tiers differ in regard to group size, degree of individualization, and duration. It is important to remark that the teacher needs to demand continuous feedback on learning success between all the tiers and during all the interventions in order to provide the learners the best possible support.

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**Figure 3.3 Response to intervention**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Number of meta-analyses</th>
<th>Year of publication</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1</td>
<td>2011</td>
</tr>
</tbody>
</table>

\[ d = 1.07 \]
TEACHERS ARE TO DIE FOR

This is akin to the notions within RTI, with the emphasis on excellent diagnosis, appropriate interventions, and excellent evaluation of the interventions. Too often, there is an overemphasis on the teaching or interventions, even when adoption of these interventions is not related to what students already know or do not know, and too often, the same intervention or teaching method is reproduced and students are blamed for not attending, not being motivated, or not being smart. Instead, if students do not learn the first time, a change in the method of teaching is more likely to move these students forward.

These three aspects certainly highlight the expertise needed by teachers, and there is a continuing interplay between them. Such a philosophy demands higher level cognitive decision skills by teachers; demands the willingness to say “I was wrong in my choice of method of intervention” and need to change what I do or to say “I was right in my choice of interventions,” as they led to me successfully teaching these students; and demands teachers engaging in collaborative inquiry about their diagnoses, interventions, and evaluations. Rushing to interventions, trying some new method, or adopting a new teaching approach without attending to the needs of the students is common and can be destructive. If the new approach does not work, it is often the case that teachers say the students were not receptive, were from the wrong postcode, or did not commit to the work. Beware of educators with solutions – if these solutions do not remediate the needs of the students.

Diagnosis – that is, understanding what each student brings to the lesson, his or her motivations, and willingness to engage.

Intervention – that is, having multiple interventions such that if one does not work with the student, the teacher changes to another intervention. It also involves knowing the high probability interventions, knowing when to switch, and certainly not creating blame language about why the student is not learning.

Evaluation – that is, knowing the skills, having multiple methods, and collaboratively debating the magnitude of impact from the interventions.

These three parts of maximizing impact may need a fourth – quality implementation. A great intervention poorly implemented is more a reflection of the implementation than the intervention. This is why we need care when we see that certain teaching interventions have high effect sizes – these are probability statements about the likelihood of an intervention. Care is still needed to ensure fidelity of implementation. So perhaps it should be Teachers are to DIE for!
WHERE CAN I START?

These considerations lead us to an idea advanced in *Visible Learning for Teachers* (Hattie, 2014): It is possible with the help of regular tests to calculate an individual effect size for each learner. This involves taking the formulas described in the preface of this book and entering the test results into a table. After calculating the mean values, the standard deviations, and the mean value of the standard deviations, one can create the following table with individual effect sizes.

<table>
<thead>
<tr>
<th>STUDENT</th>
<th>TIME</th>
<th>TIME 2</th>
<th>GROWTH ES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Julia</td>
<td>44</td>
<td>48</td>
<td>0.28</td>
</tr>
<tr>
<td>Julio</td>
<td>57</td>
<td>66</td>
<td>0.62</td>
</tr>
<tr>
<td>Kate</td>
<td>37</td>
<td>52</td>
<td>1.03</td>
</tr>
<tr>
<td>Megan</td>
<td>82</td>
<td>78</td>
<td>-0.28</td>
</tr>
<tr>
<td>Jennifer</td>
<td>39</td>
<td>62</td>
<td>1.58</td>
</tr>
<tr>
<td>Matt</td>
<td>46</td>
<td>64</td>
<td>1.24</td>
</tr>
<tr>
<td>Yun</td>
<td>57</td>
<td>73</td>
<td>1.10</td>
</tr>
<tr>
<td>Pablo</td>
<td>63</td>
<td>60</td>
<td>-0.21</td>
</tr>
<tr>
<td>Robert</td>
<td>68</td>
<td>71</td>
<td>0.21</td>
</tr>
<tr>
<td>Max</td>
<td>29</td>
<td>35</td>
<td>0.41</td>
</tr>
<tr>
<td>Rodriguez</td>
<td>67</td>
<td>68</td>
<td>0.07</td>
</tr>
<tr>
<td>Average</td>
<td>53.55</td>
<td>61.55</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td></td>
<td>14.54</td>
<td></td>
</tr>
<tr>
<td>Effect size</td>
<td></td>
<td>0.55</td>
<td></td>
</tr>
</tbody>
</table>

*Table 3.1 Effect size*

To calculate effect sizes for individual students, we assume that each student contributes similarly to the overall variance (and given we are making an assumption, we need extra care in interpretation; check any surprises with alternative evidence) and then use the pooled spread [standard deviation] as an estimator for each student. We use the following formula:
I AM AN EVALUATOR OF MY IMPACT ON STUDENT LEARNING
QUESTIONNAIRE FOR SELF-REFLECTION
John Hattie and Klaus Zierer

In the previous case, there are now some important questions for teachers. Why did Jennifer and Matt achieve such high gains, and why did Megan, Robert, and Julia achieve such low gains? The data, obviously, do not ascribe the reasons, but they do provide the best evidence to lead to these important causal explanations. (Note that, in this case, it is not necessarily a fact that it was the struggling students who made the lowest and the brightest who made the highest gains.)

Given that there is an assumption [that each student contributes to the spread similarly], the most important issue is the questions that these data create: What possible explanations could there be for those students who achieved higher impacts and for those who achieved lower impacts? This then allows evidence to be used to formulate the right questions. Only teachers can look for the reasons, and as always, we need to look for triangulation about these reasons and devise strategies for these students.

There are some things of which you should be aware when using effect sizes:

A. Caution should be used with small sample sizes: The smaller the sample, the more care should be taken to cross-validate the findings. Any sample size of fewer than 30 students can be considered "small" and thus care is nearly always needed.

B. It is crucial to look for outlier students. In a small sample, a few outliers can skew the effect sizes, and they may need special consideration [with questions including Why did they grow so much more than the other students? or Why did they not grow as much as the other students?]; the effect sizes may even need to be recalculated with these students omitted. If the overall effect does not change much when outliers are included compared with excluded, then it is probably reasonable to leave them in. If quite different, they must be omitted from the calculations.

The advantage of using the effect-size method is that effect sizes can be interpreted across tests, classes, times, and so forth. Although it makes much sense to use the same test for the pre- and post-test, this is not always necessary. For example, in some longitudinal tests, the tests are different each time, but they have been built to
measure the same dimension both times and calibrated to take into account different difficulties of the items in the tests. There are some forms of scores that are less amenable to interpreting; for example, percentiles, stanines, and NCE scores have sufficiently unusual properties that effect sizes as calculated earlier can yield misleading results.

Using effect sizes invites teachers to think about using assessment to help to estimate progress and to reframe instruction to better tailor learning for individuals or groups of students. It asks teachers to consider reasons why some students have progressed and others have not – as a consequence of their teaching. This is an example of “evidence into action.”

**CHECKLIST**

- Make your impact on student learning visible at the end of the lesson.
- Use this information to plan the next lesson.
- Implement in the intervention phase procedures to measure your impact on student achievement and to make learning visible in order to be able to deal with this in the intervention phase.
- Use formative evaluation to make learning visible.

**EXERCISES**

- Return to the self-reflection questionnaire at the beginning of the chapter and fill it in with a different color. Where has your view of things changed and, above all, why? Discuss your assessments with a colleague.
- Plan your next lesson including a phase in which students have to show what they have learned. Discuss your experiences with your colleagues.
- Design with your colleagues two tests for individual feedback and provide this formative assessment in class. Discuss your experiences with your colleagues and develop this tool on an evidence-based basis.
CHAPTER 4

IS THERE A PURPOSE OF EDUCATION?

This chapter is excerpted from

The Purposes of Education

By John Hattie and Steen Nepper Larsen

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IS THERE A PURPOSE OF EDUCATION?

John Hattie and Steen Nepper Larsen

Excerpted from The Purposes of Education

Figure 1: X. Is there a purpose of Education?
Steen: We have occasionally touched these coming themes already, but now I’d like to pose two giant – and for philosophy of education, inescapable – questions to both of us. Let’s dwell on them for a while. The first is: What is the purpose of education? And the next one is: Why does mankind need education?

First of all, this profound question: What is the purpose of education? Do you see the purpose of education as end goal directed, meaning that education has a telos, a kind of necessary future directedness towards something out or in there, and if you do, does education then also function as a beginning, a foundation, a necessary condition? I’ll just pose these questions, then we make a kind of a scene for them. Okay? Or is there an overreaching purpose of education, like the purpose, or a wide range of different purposes, in plural, for education? Is the purpose question a perspectivist question, and thereby different seen from perspectives of teachers, pupils, students, politicians, school leaders, administrators? Or is there a kind of a – what can we say – overall purpose that we all have to listen to or respect that’s beyond perspectives? Calling out loud for universals, metaphysics, ontology . . .? So a lot of questions. At least three, four questions here. But the first is, you seem to think that education is not ‘born’ with a telos. Is it then a (first) beginning? Is it kind of something you stand upon, or even a purpose we stand in while we are asking these pivotal questions?

John: Now, I want to answer it slightly differently. I want to answer it in terms of the Deweyian notion of the kind of society that we want to esteem, develop, etc. And that then has multiple answers, as you know. I also believe that by developing a fair, inviting, and democratic classroom condition you are immersing students into a world we would like them to replicate and build. It needs to have a sense of tension, disequilibrium, and critical perspective, again the attributes we want them to cherish and build. They are the future, they will make the future, so we need to build respect for self and respect for other, and most important we need to develop the skills, competencies, and capabilities necessary for what we and they consider human existence in our and then in their world. This world is changing, of course, and quite different from the world I was expected to be part of when I was in school. Now the world is more flat, students live in this world of difference, yet struggle with the breaking down of the simplistic nationalist boundaries that were assumed to be almost immutable to us. Trying to find foothold in the technological world (that many of us disparage and fail to understand their
liking of this world) and in an over-information-rich world – one that we could only dream of (when I was a kid, one sign of affluence was the presence of an encyclopedia in the home!).

As well, and I realize it is a simplistic notion, is that I want a society that’s – oh, dear, Gert Biesta would hate this – a learning society. A society where you learn many ideas but are allowed to be critical of these ideas and any notion of the established norm. And it comes back to some of the core parts of Bildung you talked about earlier in our conversation about developing respect for self and respect for others; developing a culture of self. This is very central in the concept of a learning society as I see it. One of the pleasures when visiting classrooms is to see 5-year-olds immersed in their learning society – and seeing a group of 15-year-old youngsters in their learning society. Asking them what it means to be a learner in this class, and hoping they will talk about the hard work of learning, a passion to come back and learn more. Like a willingness to go deeper beyond the facts and ideas of the class, and the skills to be reflective, critical, and creative about these ideas – and it does not matter too much if this is about civics, music, or math.

**Steen:** So your basic answer here again(!) is, as I listen to it, very sociological.

It’s based on how we interact, how we respect certain rules . . .

**John:** Yes, learning the rules of the game – particularly as to then be so well placed to advance, critique, and improve these rules of a civilized society.

**Steen:** . . . of interaction in a society. And it’s not a historical answer, and neither is it a philosophical answer.

**John:** If it was historical – I don’t want to reify what was. I want students to live as students as much as they can. It is not about preparing them for a future 10 to 15 years away. It is about the now. I think that our 5-year-olds need to be 5-year-olds today and learn what it means to be joyful, questioning, curious, and build the precious knowledge to be even more joyful, questioning, and curious. They are the future, especially as they invent the future.

**Steen:** And that also means, probably, your answer to the second question would be that education purposes have to be plural.

**John:** Yes, absolutely.
Steen: Does it mean that different interests and power structures in society have formed the changing historical purposes and narratives of education?

John: Yes, absolutely.

Steen: So in your eyes there is no overreaching visionary purpose of education or a kind of obligatory and stable logic of education?

John: No, but at the same time there is a core, and it comes back to that respect for self and respect for others. The Nazis didn’t have that philosophy. They respected only certain others. I worry about where America’s going in its designs of certain others. I find it fascinating in the world at the moment where we’re talking about free trade and, well, we want free trade (well most of us do). But we’re doing the opposite with people.

Steen: We don’t have free rights for people to move wherever they’d like even though commodities, capital, money, pictures, and signs are allowed to do so (Safranski 2003). The global society is a vivid paradox.

John: And that’s not the kind of society that I think is valuable. I’m not a nationalist. I won’t stand for the flag, which is the symbol of too many closed societies. I am a person of the world (and yes, I have this luxury which is denied to so many). I think the whole notion of xenophobia is the antithesis of what we’re talking about here.

Steen: So, in a way, the purpose could be to realize and ‘foster’ the world citizen?

John: Very much so. And we need to protect the world as much as we develop it. I never underestimate the ingenuity and creativity of the collective to reframe problems, to invent solutions that not only advance society but redirect it (for example, the car solved many of the urgent problems caused by horses and carts; the iPhone solved many of the problems of the old telephone system; and so on). The inventors of all these once went to school and learned about learning and developed precious knowledge – such that they could question, create, and go deeper into their content areas.

Steen: Clear-sighted Immanuel Kant was writing about the world citizen and the cosmopolitan state in his philosophical essay Perpetual Peace in 1795 (Kant 2007/1995). He depicted the cosmopolitan state as a “great political body” in which every member state receives its security and rights from a united
power and from decisions in accordance with the laws of a united will. The task of this cosmopolitan state is to safeguard and implement every world citizens’ security and rights. This vision of the cosmopolitan state lifting the unproductive tensions between competing and more or less unfriendly nation states up to a higher and more peaceful level is not realized yet even though Kant envisaged it years ago.

**John:** Correct.

**Steen:** And this cosmopolitan view, it could be understood as your purpose of education?

**John:** Yes, but purposes in plural.

**Steen:** But then, it seems to me that there is at least a little tension, or a twofold or bilingual logic here. Because one is then to state, what is the social laws of interaction in the now? Meaning, how do we interact with other persons right now in this situation? The other thing is this dream, or hope, or regulative vision of something that could happen. That we could become political human beings (citizens of the world, in German: Weltbürbern) . . .

**John:** Oh, but our students are already inventing new forms of social interaction, and will continue to live and grow in this world – a little uncomfortable and somewhat unfathomable to us, who like the world we created.

**Steen:** . . . much more than nationalists, which is a kind of a political vision or dream . . .

**John:** Yes, it is.

**Steen:** . . . not fulfilled yet, due to Ernst Bloch’s unforgettable and powerful view on our vivid future hopes of realizing the potentials of the not-yet in the present now (Bloch 1986/1954–1959).

**John:** There is a wonderful quote on the wall of the Scottish Parliament building: “Work as if you live in the early days of a better nation.” Yes, we have to enable children to have not only the skills to solve problems, not only the knowledge to help solve problems, but also the skills to create new problems.
BETWEEN SOCIETAL DIAGNOSTICS AND FUTURE HOPES

Steen: Much to my surprise – knowing that you are primarily trained as a statistician – you tend again to favor, honor, and apply a kind of a socio-logical take-off, maintaining that we have to cope with and handle this present social sphere with all its problems and tasks in which we are living. At the same time you don’t seem to be preoccupied with longer historical lines in order to state whether or not we might have lost something in the past or we could gain something in reconsulting the past. My third observation is that you have a strong and passionate vision of what could become a better hope embedded in the now, but also leading to a better future. Is this a fair description of your credo?

John: Yes, change and improvement can start with an individual, with a small group, and in schools. Michael Fullan claims it mostly starts in the middle [Fullan 2015]. I think you have individual skills that you should have to enable creating future hopes. There are many ‘I’ skills, such as a sense of confidence, seeing oneself as a change agent, being aware of one’s proficiencies to have and gain, great conflict resolution skills, a desire to attain success collectively, and most of all skills in demonstrating social sensitivities. There are also many ‘we’ skills, such as a belief that the group one is in can organize and execute actions, a belief that the group can be successful, and a shared purpose to learn. Too often schools focus too much on the ‘I’ and ignore the critical ‘we’ skills – as they are the essence of living productively in society.

Steen: When it comes to radical political change of societies, we can take two different examples, and the first one could be Cuba. In 1959, 90 guerrilla people stole a motorboat – called Granma – and sailed it into Havana, and then they changed the world. Ninety dedicated guerrillas were enough to let the old regime fall. Or you have a very, very, small vanguard party in the Leninist revolution of Soviet Union in 1917. They stormed the Winter Palace, removed the Tsar and his power apparatus, and they changed their society. But now, it doesn’t seem probable that the world can be changed these ways.

When it comes to radical societal changes, we could maybe say that Mark Zuckerberg and Steve Jobs are today’s immaterial guerrilla people on the virtual Granma motorboat version 2.0. They are also vanguard Leninists and changing the world dramatically, but only to place them-selves and their business empires on the top.
John: I’m sure that when the historians look back to this time, Mark Zuckerberg and Steve Jobs probably had more political influence in terms of uniting the world, for good or bad, than any particular individual in the political scene. If nothing else, the ‘we’ are not just people who look like us.

Steen: And does that also have to do with the purpose of education, that you kind of teach people – or you could say people have to learn – how to reflect upon these power structures of modern or globalized communication?

John: Yes, because these enhanced connections bring this power into the here and now – often far earlier for children that it did for me. If I wrote my biography, it would feature the amazing randomness of opportunity, the naivety of the world I lived in, and the insulation of the small town. Not anymore. Not only do we have the rule of law, we are now inventing the rule of living in a flat world.

I have spent many years coaching cricket, focusing on 17- to 20-year-olds. One of these boys became an airline engineer. I remarked that this would let him get to many places in the world. Oh no, he said, we sit in the basement at the airport and monitor every plane as it is flying. You would not believe what happens mid-flight, and it was his role to problem solve, diagnose, and fix the planes – my point is that today’s young adults seriously build the plane as they are flying it.

WHY DOES MANKIND NEED EDUCATION?

Steen: Let’s now move back to the second very big question that has been debated for thousands of years: Why does mankind need education? You can find different answers to this question, if you go back to Augustine’s De magistro (The teacher), and even further, if you go way back to Plato and his dialogue Cratylus (Augustin 1876; Plato 1989). And in enlightenment philosophy and the new humanism, there were many people coming up with answers to the question. Kant wrote that man is the only creature in need of education (Kant 1971/1803).

Philosophical anthropologists have claimed that humans need education because we cannot rely on our natural instincts and therefore we have to move from first to second nature. Let nature be nurtured according to, for example, Hegel’s conceptual and historical philosophical view of the spiritual
development of man and society (Hegel 1979/1807).

How do you view and value these philosophical claims and take offs? Are we as educators and educational scientists in need of a philosophical anthropology? Is it worth it to try answer a question like: Why is mankind in need of education? Can you give answers to these questions, or are they simply too far out, too speculative for an empirical working and preoccupied scientist?

**John:** Well, with my usual codicil that I’m not a philosopher, I was very entranced with Rousseau’s Emile, and the conflict about the purpose of education making a man or a citizen (recognizing that Emile was a male). He wanted Emile to be brought up surrounded by nature, and learning about sentiment in their teens (Rousseau 1979/1762). This seems pie in the sky in today’s world, some kind of Summerhill. Although there are some great examples (John Marsden heads great schools here in Melbourne that are more aligned with this approach that the usual school – seehttp://www.candlebark.info/).

And I’m a great fan of Michael Young, who I read quite a lot of as a sociologist (Young & Muller 2013). He argues that we need education to learn that which we wouldn’t learn if we didn’t go to school. I think that’s the best justification that I’ve heard for justifying some of the topics we teach in school – to make the person and the person in society. If there was no education or schooling then we would not know what we don’t know.

I’ve just read a book of an American girl who was brought up in quite a racist place in North Dakota, where she didn’t go to school, ever (Westover 2018). Her parents were gun people, and they were protecting against the wicked government, and so on. She ended up getting a PhD. And the story is how she did that. She got out, but there are too many students who are brought up in impoverished situations who do not know the options, the alternatives, and the opportunities. A major purpose of schooling is to provide these options and different perspectives of the world.

**Steen:** The most extreme example of an anti-modern tribe must be the Amish people. They are still riding horse carriages today.

**John:** Yeah, but even them, they are exposed to the world. They just have a view of living in it. And they actively reject many parts of this world. But some people don’t expose their students even to the world. Like this case with this woman...
in North Dakota. Now, that’s the extreme, but it makes the point that there is a major role for schools. And it’s your argument about Richard Rorty before, to expose people to alternative ways of thinking, how people have thought differently.

I certainly don’t think the role of school is to prepare you for life, because it denies the fact that you’re living as a kid. Like with my own students, I wanted them to enjoy being a 6-year-old, and a 10-year-old, and a 15-year-old.

Steen: Yeah, you shouldn’t sacrifice the now on the altar of the future.

John: No.

Steen: That’s what you did in the old days. You’d say, “Well, this is hard, and it has no sense, but you’ll get wiser.”

John: Oh, you hear it in schools every day. Steen: “You’ll get pie in the sky when you die.” But, John, is there a profound philosophical anthropology behind your Visible Learning program?

John: Yes. I think there is a tremendous obligation on those of us who demand that students spend 15 years of their life in schools, which, by the way, is longer than we ask some people to stay in jail for murder. If we are asking them to stay in schools, there is an obligation that we do have a positive impact on them. Of course, we have to question what that impact is. And you shouldn’t have a good teacher by chance; it should be by design. I do think there is a moral obligation to question the efficacy and the impact of teachers and schools, which is very much underlying the philosophy of what we’re doing with our Visible Learning program in schools. It does beg the question, the ultimate question, of the value of that and the worth of doing it. Because I emphasize the notion of impact, it is forcing debates about the essence of what we value and wish to develop in the nature of children, and one of the most critical impact issues is developing children to live in the world.

Steen: But that’s only touching upon the how question, stating how we – the teachers – can have bigger impact. How we can make better interpretations of the learning data. It is basically also a question about what and why, like we have already stressed and discussed.
IS THE SCHOOL BORN WITH A PURPOSE?

John: I lose more sleep over the political job than I do over my day job because the stakes are so high. As an academic, I can write a book, I can get criticized. In fact, it’s a luxury to be criticized. Because, as you know, 99% of articles are not even cited – not even by their own author. So the fact that I’ve got criticism, I’ve got to treat it as a luxury. But, in the political space, the stakes are high. You’re really dealing with real people’s lives. The agency, Australian Institute for Teachers and School Leaders, is owned by the federal government although most educators believe they own it – it generates a third of a million hits to its website a month, and is also responsible for implementing government policy. It is a delicate gift, balancing responsiveness to the needs of educators and working with nine states and territories and federal government.

Steen: Yeah, and much money is involved. Let’s try to change gears now. Another thing is, if we call this – our mutual – book The Purposes of Education, the profound question is, if the role of the teacher primarily is to invite people to enter an institution that possesses an a priori purpose.

John: Yes, this is a part of it.

Steen: Do you think that the school is born with a purpose, that it has a kind of a will or logic of its own? Is the school system born with a purpose? Or is it open for ongoing and changing interpretations stemming from the pupils and the teachers?

John: Well, when you think of how our current school system was born in the 1800s, part of it was very economic, part of it was very much building the labor system. And that still is the case. It serves as a training ground for employers, but over the past 100 years we have so much more as purposes of schooling. Schools are the breeding place for our democracy, surely the most civilizing institutions in the land.

So often I hear that the schools of the future will look quite different from today’s schools – with visions of students working at home, no longer school hours or even school as a place. But we have a society where both parents often work full-time roles, and someone has to be with the young children. Yes, this is not saying schools are babysitters, as they are more than that, but they do include this role also.
Steen: Then they are compensatory in a way. But of course, I also think that, from the very beginning, one argument was to produce a common workforce, a more skilled labor, being able to read, write, do math, and so on. It was also a national project. You should be a part of your nation, study and learn the myths of the nation, and learn to become a real citizen. And maybe be able to come from the countryside, learn the national language, and to have the possibility to move away from your regional sphere, physically and mentally.

John: But there was another assumption which I’m sure was not explicit at the time, but I think is an incredible pressure on us as educators. The assumption is that, by making schooling compulsory, we are saying educators can do it better than the parents, on average, and I take that very seriously.

Steen: And, at the very same time, the Danish school system, at least, but you also have it here, it had a little kind of opening towards free schools where people can do . . .

John: . . . educational experimentation. Yes, we still do that here in Australia . . .

Steen: . . . and parents, they can organize their own schools. You have your Catholic schools here, and properly also Summerhill schools, Steiner schools, sport and art schools, etc.

John: The Catholic schools and the state schools look very similar. Indeed once in a classroom in this country it would be hard to say if it was Catholic, state, or independent [except that more money is spent in independent schools on the buildings and facilities – but the teaching is similar].

Steen: In Denmark they also look pretty similar, but the idea was that, even though the state has said or the official educational ‘logic’ declares that the state can do it better than the private and narrow-minded parents themselves, there is still a legal and legitimate opening for the parents to organize schools and to get some economic financial support from the state to run the schools.

John: You’re right, and there are two things we need to consider. First, if you look at Larry Cuban’s work, who is a US historian of teaching, he looks at how teachers have changed over the last 200 years [Cuban 1984]. And his argument is that 85% teach in a similar manner, 10% teach more effectively but in a similar manner, as we did 200 years ago. About 10% are different and 5% are dramatically different. And so every time when I look around the world
and Larry looks around the world, and you look at people who have engaged in experimentation, that 85, 10, 5 seems to hold. We see it across Australia – and so much attention is given to the 15% but it has not changed the mainstream of schooling.

In this country, there’s a school out near the airport here that’s run by quite a famous teenage author – John Marsden. It is very, very different, stunningly different (Marsden 2019). Very much like Summer-hill – which was Bertrand Russell’s school Candlebark. And it is based on probably the world’s biggest school campus: more than 1,100 acres just north of Melbourne, Australia, and it uses this gift fully. Everyone is on first name basis, extensive use of peer teaching, and is a true community of learners. But it requires a gifted, fully committed leader as it is so much harder to commit to teaching in this environment with this ethos. It is unlikely to become the norm.

Further, across Australia during the past 20 years we have swung the pendulum too far to support parents’ rights to choose schools. This has led to a very unhealthy debate about school differences, maximizing beliefs and branding about how school x differs from school y, and competition between state and independent schools. One state reinvented many of its public schools as ‘independent public schools’, so much money is spent by all in advertising, and too often principals consider a good school to be one with a large enrolment, thence stealing students from the schools next door. Here in Melbourne over 60% of students pass their local school to go to their school of choice.

There is just not the evidence that the variance between schools is that large in Australia. Sadly, it is increasing, but this is also leading to residualization effects in some state schools as the grass is always greener in the independent schools (the ‘real’ choices). There is little evidence, once you control for input variables like prior achievement, that state, Catholic, or independent schools differ much on achievement or progress.

The information parents have to choose is minimal. There is information about average achievement scores on the government website, but it does not consider prior achievement or socioeconomic resources of the home. It does report a minimal amount of progress information, but that is harder for parents to find than average scores – which are often better indicators of house prices. But I am not implying parents are irrational when they make
IS THERE A PURPOSE OF EDUCATION?

John Hattie and Steen Nepper Larsen

choices, and so often they choose schools where there are students they want their children to be friends with.

But this overplay for the rights to choose has led to more money being spent on the wrong things – what I call the politics of distraction in contrast to the desired politics of collaborative action. I wrote two papers with these titles to make this contract (Hattie 2015a, 2015b).

Steen: Okay. There seem to exist two extreme positions at stake here, viewing and conceptualizing the state very differently. One is stating that the state needs to have ambitions also for socialization, upbringing, cultural heritage, canonical subjects, whatever. And the other is that the state has to reduce its influence and then we should let the market and the consumers [parents, taxpayers] decide.

John: I’m not a fan of the latter. I would like the local school to be the best in the neighbourhood, and the best school in the neighbourhood is also the one next door. But this is a little naïve in this day, although the differences between schools is not as large as many believe or would advocate.

Parents can also decide to home-school, and there are about 30,000 students in Australia who call Mum or Dad, teacher. There is much research that the achievement of these students is quite high. But then the average student who goes into home-school typically is performing at about the 85th percentile. The education in home-school is only as good as the teacher. Certainly for me, my boys deserve better than me, need to learn to interact with others, and have the variety of experiences that regular schools can offer.

My sadness with all this debate is that I do think that the debates revolving around school choice are distractions. We should not be so obsessed with structural questions about the nature of schools, the grouping of students, class size, buildings, and similar. It detracts from the needed focus and investment in excellence and expertise, which every student is entitled to. Our mantra is students deserve great teachers by design, not by chance.

Take the penchant to set up different kinds of schools – charter schools, trust schools, academics, and so on. I have news to these advocates – within six months of setting up these new-fangled entities – you are running a ‘school’!
Steen: Yeah, and there are certain rules about running a school.

John: It’s no secret that we’ve kind of worked out the fundamental ways of running schools. There are deviations and there are differences, but you go to any school in the world and you could walk in and understand them immediately. They might have different systems and different kinds of leadership structure.

Steen: You have uniforms here in Australia, and school-kids and students do not wear uniforms in Denmark.

John: Uniforms, oh, my goodness, they have zero effect on students’ learning, which means I don’t care whether you have them or you don’t have them. Just get over it and make a decision. Any system that’s obsessed about those things is obsessed about the wrong things. And, unfortunately, there are a lot of wrong obsessions. This comes back to the politicians. Sometimes they like those obsessions. Bill Clinton demanded they have uniforms and we had a whole debate about it. What a destructive debate, because it wasn’t a debate about learning and about the moral purpose of schooling, which matter so much more.