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Visible Learning and educational policies in New Zealand and Australia

Abstract: This article analyses the theoretical background of changes that have taken place over the last two decades in the Australian and New Zealander educational systems. That background has two elements: first, understanding of pedagogical activities performed by the teacher and students in the educational process has been modified, second, Hattie's concept of Visible Learning has gained a following. The text consists of four sections. The first section presents a reconstruction of the traditional model of perceiving the actions of teaching and learning. In the second section an insight into the foundations of an innovative, evidence-based approach to education is provided. The following section describes the concept of Visible Learning in relation to the main determining factors of education. Finally, the last section describes some of innovations introduced in New Zealand's and Australia's educational systems which, it is argued, raise the effectiveness of educational practices there.

Keywords: traditional education concept, evidence-based teaching, Visible Learning, education, system of education, New Zealand, Australia.

Introduction

Education and its management system require constant reform. This is not only due to the changing political situation, as one might think, looking at the reality in Poland, but also due to the problems that the public education system must face. Out

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of many problems, one of the most important is guaranteeing students the conditions for real learning at school, and not just spending time (many years!) more or less voluntarily in it. This task forms the basis of public legitimacy of the education system and the school as an institutionalized space for teaching and learning. Understanding this issue should also be at the heart of decisions regarding education reforms. The changes that have been introduced for many decades in New Zealand and Australia prove, in my opinion, the raising public awareness, what is the main problem of education and the search for ways to solve it. The starting point of the longstanding changes in the 1980s was the focus on insufficient use of educational research data. Pedagogues and researchers recognised shortcomings in *'using a combination of privileged and tacit knowledge of the context, political savvy, professional training and logical analysis. Data played almost no part in decisions.'*¹ New Zealand and Australia stopped omitting research and data and started to base education policy on the results of educational research. Policy makers and educators reviewed the existing way of thinking about the tasks of the education system and the whole attention was directed to education and its quality derived from research. In 2003 New Zealand's Education Minister, Trevor Mallard put a new emphasis on quality teaching and said it would be a priority in his programme to improve student achievement. Nowadays all minor and major decisions at school or government level are taken after in-depth analyses of facts and data received from education research. I believe that tracing the processes that took place in Australia and New Zealand will benefit us to think about Polish education, its strengths and weaknesses.²

In this article I will present changes in the education system not by analysing particular education programmes but by referring to two models of teaching and learning – a traditional and modified. This is due to my interest in the essence of change and not particular modifications which took place in New Zealand and Australia. In the first section I will sketch a traditional model that can be easily compared to the pre-reform period. The following section provides an insight into foundations of an innovative evidence-based approach to education. The third part of the article sheds light on factual constituents of education process and their interaction according to the modified teaching and learning model. The fourth part presents New Zealander and Australian methods of education improvement by integrating Visible Learning with the system of education. Conclusions illustrate ideas on how Poland may follow effective and proven education practices.

¹ L. Earl, S. Kat, *Leading Schools in a Data-Rich World*, https://www.researchgate.net/publication/252669674_Leading_Schools_in_a_Data-Rich_World.

² D. Klus-Stańska, *Dlaczego szkolna kultura dydaktyczna się nie zmienia*, "Studia Pedagogiczne" 2011, t. LXIV, pp. 43–50.

1. Traditional understanding of education

I suggest looking at the changes in New Zealand and Australia mentioned in the introduction through the prism of traditional model of education. Traditionally teaching is perceived as a process planned outside the school by policy makers and carried out in the same way by all the schools. The main aim of educators in this model is to prepare students for external exams so that they obtain high results. Schools compete with each other and fight for the best position in ratings, which are later published in newspapers and widely discussed in the media. According to Geoff Masters, Chief Executive of the Australian Council for Educational Research, teaching in the pre-reform was based on

[...] the delivery of the appropriate year-level curriculum to all students. Under this view, the role of teachers is to deliver the relevant curriculum; the job of students is to learn what teachers teach; and the role of assessment is to establish how well students have learnt what teachers have taught and to grade them accordingly.³

The process of schooling is simplified to an assumption that ‘teaching’ equals ‘learning’. Dariusz Stępkowski, following the German pedagogue Dietrich Benner, points out that such traditional understanding of education as ‘forming’, ‘shaping’ or ‘bending’ can be well illustrated by the following figure of the didactic triangle in the classic version.⁴

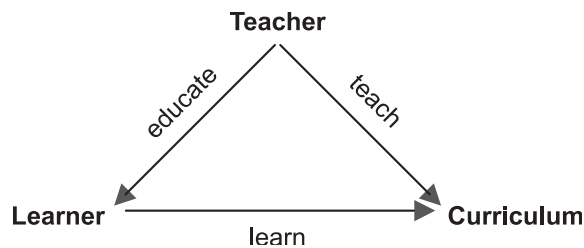


Figure 1. Didactic triangle in the classic version

Source: D. Stępkowski, *Kształcenie jako dobro pedagogiczne i źródło nierówności edukacyjnej* (in print).

The ‘Curriculum’ plays the key role in the above-mentioned construction. It focuses on the Teacher’s activity – ‘teaching’, and the Learner’s – ‘learning’. According to this mapping, education is understood as a transfer of knowledge and skills between the person who has them and the person who should master them. The action ‘edu-

³ G. Masters, *The Role Of Evidence In Teaching And Learning*, <https://www.teachermagazine.com.au/columnists/geoff-masters/the-role-of-evidence-in-teaching-and-learning>.

⁴ D. Stępkowski, *Kształcenie jako dobro pedagogiczne i źródło nierówności edukacyjnej* (in print).

cate' creates a separate kind of pedagogical interactions⁵, which are loosely connected with the concepts prevailing in education – teaching and learning, or are not connected with them at all. The above structure presents why in the traditional model of education the concept of schooling is divided into two actions: teaching and educating. 'Educating' is limited to the moral sphere or gaining good manners.

By looking at New Zealand's system of education through the prism of the model presented above, we can understand what changes have occurred in the transformations that took place in 1989–1999. It was not yet the period of reforming the educational system on the basis of research approach, but the focus was rather put on administrative modifications. At that time education was perceived as a crucial factor of economic growth and social development.⁶ The report *Ten years on: How schools view educational reform* presents principals', trustees', parents', and teachers' opinions about the impact of the reforms. Some of the main findings seem to be rather negative: 87% of principals thought government funding was inadequate to meet school needs, rising workload and paperwork, longer working hours, more severe competition between schools, inequality in quality education.⁷

2. An innovative evidence-based revision of education

The weaknesses of the reform movement mentioned above became an incentive to modify thinking about education and the traditional model required a deeper reform. That became the starting point for developing a new approach known as evidence-based approach. At that point it is worth explaining the term 'evidence' and its source.

The meaning of the evidence-based approach can be explained by referring to Philip Davies, who indicates the relationship of this approach with the field of medicine (identifying and applying good practices). As an example, Davies presents University of Oxford Master's programme in Evidence-Based Health Care. He believes its central feature is that students learn by attempting to solve clinical and population-based problems that they bring to the course. This approach to learning, and teaching, is explicitly based on the problem-solving, self-directed model of adult education.

⁸ It means that in order to treat a patient, medical practitioners need to take into ac-

⁵ D. Benner, *John Dewey, a Modern Thinker: On Education (as Bildung and Erziehung) and Democracy (as a Political System and a Mode of Associated Living)*, [in:] L. Waks, A. English (eds.), *John Dewey's Democracy and Education: A Centennial Handbook*, Cambridge University Press, Cambridge 2017, p. 265.

⁶ G. Hawke, *Education Reform: the New Zealand experience*, pp. 3–4, https://www.researchgate.net/publication/228585086_Education_reform_the_New_Zealand_experience.

⁷ C. Wylie, *Ten years on: How schools view educational reform*, <https://www.nzcer.org.nz/research/publications/ten-years-how-schools-view-educational-reform>.

⁸ P. Davies, *What is Evidence-Based Education*, "British Journal of Educational Studies" 1999, vol. 47, no. 2, p. 110.

count all the best available evidence but also use multiple forms and sources of those evidence. Alongside using the evidence from academic enquiries doctors collect and use data such as patient's histories or they set additional control tests.

It is then no surprise that the approach has inspired some academics to transfer good practice from medicine into education. Among many researchers who were trying to make use of the data was John Hattie who presented his findings in the form of Visible Learning concept.

Hattie presented his concept of *Visible Learning* in a book of the same name.⁹ These are research syntheses results from 1500 meta-analyses of 90,000 studies involving 300 million students into what works best in education presents multiple attributes that affect student learning. Deeper analyses of those influences on student achievement show the importance of both the student and the teacher in achieving objectives.

To determine the impact of teaching and learning activities on the achieved effect, Hattie developed a measure – the size of the effect. It is the difference between the average of the effects of the same group studied before and after the intervention or the difference between the average of the effects in the test group and the control group (without the intervention tested) divided by the standard deviation or the measure of dispersion (the measure of random changes). It is a number which has both positive and negative values. Hattie distinguished its 4 ranges: below 0.0 (negative) Decrease achievement; from 0.0 to 0.15 (low) What students could achieve without schooling; from 0.15 to 0.4 (medium) Typical effects of teachers on students that can be accomplished in a year of teaching; from 0.4 and above (high) Zone of desired effects. To illustrate the concept I will present one activity dependent on a teacher and a student from each area e.g. Negative effect: Retention (–0.16) Television (–0.18); Low effect: Reacher subject matter knowledge (0.09) Diet (0.12); Medium effect: Homework (0.29) Personality (0.19); High effect: Teacher clarity (0.75) Self-report grades (1.44).¹⁰

The proposed concept has met two types of criticism. On the one hand, the criticism affected the research methodology – calculating the size of the effect ‘*Fundamentally, Hattie’s method is not statistically sophisticated and can be summarized as calculating averages and standard deviations, the latter of which he does not really use.*’¹¹ On the other hand, the Visible Learning theory itself has become the subject of criticism e.g. ‘it belongs to the radical constructivist paradigm therefore the problems of constructivism is directly connected with Hattie’s concept of teaching, which results in a double breakdown of the essence of teaching.’¹² Despite criticism of Hattie’s Vis-

⁹ J. Hattie, *Visible Learning*, Routledge, New York 2008.

¹⁰ *Ibidem*.

¹¹ P. J. Bergeron, *How to engage in pseudoscience with real data: a criticism of John Hattie’s arguments in Visible Learning from the perspective of a statistician*, <https://mje.mcgill.ca/article/view/9475/7229>.

¹² T. A. Rømer, *A Critique of John Hattie’s Theory of Visible Learning*, “Educational Philosophy and Theory” 2019, vol. 51, no. 6, pp. 587–598.

ible Learning theory, the quest for justification of improving the school system, in particular teaching and learning, remains a current task. The change that has been made thanks to evidence-based approach should be continued in order to find better solutions between teaching and learning, which I suppose is the heart of the matter.

3. A new perspective on education

I believe that despite criticism Hattie's *Visible Learning* theory places his approach appropriately in the modified model of thinking about the relationship between teaching and learning and harmonizes with Benner's and Stępkowski's understanding of education. The synchronization of a student's and a teacher's interactions create real education. Both participants of pedagogical action are needed and have separate activities to perform – one teaching, the other one learning. The introduction of harmony or synergy in these activities is the task of school education. It is also the key to success in education.

This concept where both activities equally contribute to education is well depicted by Dietrich Benner in the form of a modified didactic triangle.¹³ The following figure presented in Figure 2 is a graphical representation of Benner's proposal.

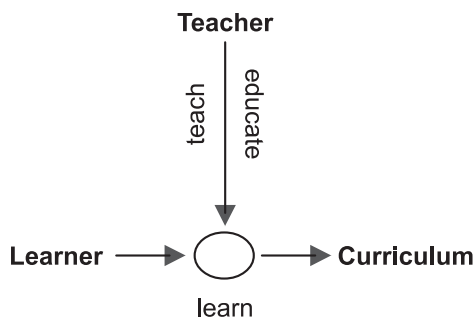


Figure 2. Modified didactic triangle

Source: D. Benner, *Allgemeine Pädagogik und Sonderpädagogik. Überlegungen zum Verhältnis von Inklusion und Exklusion aus der Sicht Dreier Kausalitäten in Erziehungs- und Bildungsprozessen*, "Człowiek – Niepełnosprawność – Społeczeństwo" 2018, vol. 4(42), p. 9.

Although the position of participants of the didactic situation – the 'Teacher' and the 'Learner' – is the same as expressed in Figure 1, the arrangement of the activities performed by them in relation to 'Curriculum' is fundamentally different. It is worth remembering here that in the traditional system of education the 'Curriculum' is the object of an exchange between the 'Teacher' and the 'Learner'. In the new concept of

¹³ D. Benner, *Allgemeine Pädagogik und Sonderpädagogik. Überlegungen zum Verhältnis von Inklusion und Exklusion aus der Sicht Dreier Kausalitäten in Erziehungs- und Bildungsprozessen*, "Człowiek – Niepełnosprawność – Społeczeństwo" 2018, vol. 4(42).

education (the same as in evidence-based education), however, it is the goal of performing the activities of 'learn/teach'. The activities 'teach/educate' coming from the 'Teacher' side are aimed at the area marked with the circle in which they meet the 'Student's' activities.

The above considerations on teaching and learning may support my reconstruction of the way school education and its system have changed in Australia and New Zealand. To confirm that view, I would like to draw one's attention to a bottom-up movement that has been triggered by the search for a better teaching/learning model. In this context, the undoubted merit of Hatti's Visible Learning theory is the encouragement to reflect and to change school practice – it is sort of the third face of Visible Learning. In this part, a bottom-up change in the way of thinking about the relationship between teaching and learning that is taking place, regardless of Hatti's theory and book, can be illustrated by the results that both New Zealand and Australia achieve in the PISA study.

In 2001 the Organization for Economic Cooperation and Development (OECD) published the first *Programme for International Student Achievement* (PISA) results of 15-year-olds' achievement in reading literacy in OECD countries. The test was conducted among 265 thousand students from 32 countries. The countries which received results at 'High quality and Low equity' level were: Finland, Canada, Ireland, Korea, Japan, Sweden, Austria and Iceland. The countries which received results at 'High quality and High equity' level were: New Zealand, Australia, Belgium, Norway, United Kingdom, United States. The countries which received results at 'Low quality and High equity' level were: Czech Republic, Spain, Hungary, Mexico. The countries which received results at 'Low quality and Low equity' level were: Poland, Greece, Portugal, Luxembourg, Denmark, Switzerland, Germany.

It is clear that PISA is being criticised for e.g.

underestimating the margin of error on the scores provided by the OECD, ranking of countries from best to worst what is more open to interpretation than one would understand from OECD analyses. To resolve this issue, the OECD should provide PISA users with a structured sensitivity analysis that takes all the variables in the ranking into account.¹⁴

The interesting fact in the view of the above model of the relationship between teaching and learning is that both New Zealand and Australia had high achievements, but achievement disparities were quite wide (High Average and Large Variance). This means that despite the reform movement in the education system of both countries, prevailed thinking that according to a traditional education model the external factors not relationship between a teacher and a student is in the center of attention.

¹⁴ A. Saltelli, *The International PISA tests show how evidence-based policy can go wrong*, <https://theconversation.com/international-pisa-tests-show-how-evidence-based-policy-can-go-wrong-77847>.

When looking for the reasons of this situation, it is worth to pay attention to the report from 2004 *Using Best Evidence Syntheses to Assist in Making a Bigger Difference for Diverse Learners* prepared by New Zealand's Ministry of Education explains that

for New Zealand, such variance is predominantly within-school variance rather than between-school variance, suggesting an important role for New Zealand principals in both recognizing excellence within their schools, and building up the quality of teaching across the school.¹⁵

As it turns out from the quote, the reasons of the above differences in the quality of education were noticed both in the work of a teacher and school. In other words the same schools educate students who gain really high scores in external tests and students who receive poor results. Therefore, neither the government nor the system of education but individual schools and teachers seem to have the biggest impact and are responsible for effective education.¹⁶

The focus both in Australia and New Zealand has shifted in recent years from pointing at influences of the home, the structures of schools, investing money into school buildings, greater use of modern technologies and creating new examinations.¹⁷ The above valid considerations lead to seeking better ways of teachers' and schools' functioning and sharing their experiences. Examples of activities in this area will be presented below.

The vital areas which are nowadays undergoing constant improvements include, among others: implementing a variety of research-based strategies and approaches to improve learning¹⁸, effective collaboration within and between schools¹⁹, developing students' features of leadership and moral courage²⁰, developing students' features of confidence and creativity²¹, review and improvement of curriculum.²² The interventions in those areas are student centred, tailored exactly to specific school requirements and all concern two main participants of education process: a learner and a teacher.

¹⁵ A. Alton-Lee, *Using Best Evidence Syntheses to Assist in Making a Bigger Difference for Diverse Learners*, p. 3, http://www.leadspace.govt.nz/leadership/leading_learning/synthesis.php.

¹⁶ *Ibidem*.

¹⁷ J. Hattie, *Distinguishing Expert Teachers from Novice and Experienced Teachers*, p. 2, https://research.acer.edu.au/cgi/viewcontent.cgi?article=1003&context=research_conference_2003.

¹⁸ *Keeping children engaged and achieving in reading*, <https://www.ero.govt.nz/assets/Uploads/ERO-AoG-17985-Teaching-strategies-that-work-Reading-v3.pdf>.

¹⁹ *Collaboration to improve learner outcomes. What does the evidence tell us about what works*, <https://www.ero.govt.nz/assets/Uploads/Collaboration-to-Improve-Learner-Outcomes.pdf>.

²⁰ *What Drives Learning in the Senior Secondary School?*, <https://www.ero.govt.nz/publications/what-drives-learning-in-the-senior-secondary-school/>.

²¹ *Melbourne Declaration on Educational Goals for Young Australians*, http://www.curriculum.edu.au/verve/_resources/National_Declaration_on_the_Educational_Goals_for_Young_Australians.pdf.

²² "Primary Matters" 2015, Issue 5, http://docs.acara.edu.au/resources/20150420_Primary_Matters_Issue_5_2015.pdf.

In order to develop an efficient evidence-based educational strategy, decision or improvement Australian and New Zealand school leaders and teachers first gather, analyse, and use objective data. They primarily focus on research and 'quantitative' numerical data but also the use of 'qualitative' information is quite vital. With the purpose of collecting and managing only high quality student related data educators are provided with professional help and guidelines. In Australia teachers are provided with procedures by e.g. NSW Government Department of Education.²³ Moreover, in order to keep quality teaching they regularly undergo professional training. *Data Driven Evidence Based Teaching in Schools* is a conference to benefit the needs of teachers in Australia.²⁴

The appropriate Evidence-Based Teaching model exploration in New Zealand aims at changing the viewpoint of what education is. The government reports and findings presented above convince me that the learner and his active role is more and more emphasised in education process. Furthermore, the Ministry of Education and subordinate institutions make successful use of evidence and devolve this notion downwards. The concept of Visible Learning is deeply rooted in a classroom practice and is supported by the system.

4. New Zealand and Australia – the use of Visible Learning in effective student education

The above Figure 2 explains the position and actions of two participants of educational situation. The new area which lies between the Learner, Teacher and the Curriculum is constituted from blending the actions – teach/educate and learn. Both participants of the pedagogical interaction perform actions assigned to their role (teachers do not absolve young people of being active, do not hurry, give time to think, allow learners to perform actions on their own, allow them to make mistakes, etc.).

Teachers who cooperate with their students in this way start to understand them better and get to know their aspirations and dreams. New Zealand's Ministry of Education endorses the above opinion: *'sharing power and the responsibility for learning, teachers set their students on a path to fulfilling the vision we have for them, with the ability to secure a sustainable social, cultural, economic and environmental future for our country'*.²⁵

²³ *Principles for collecting internal school data*, <https://education.nsw.gov.au/teaching-and-learning/school-excellence-and-accountability/sef-evidence-guide/guidelines-for-using-data/collecting-internal-school-data>.

²⁴ *Data Driven Evidence Based Teaching in Schools conference*, <https://www.criterionconferences.com/event/evidence-based-teaching-conference/brochure/>.

²⁵ *Leading Innovative Learning in New Zealand Schools*, p. 11, <https://www.ero.govt.nz/assets/Uploads/Leading-Innovative-Learning-in-Schools-2018.pdf>.

The *Leading Innovative Learning in New Zealand Schools* report illustrates the actions undertaken by all the examined school teachers. They were constantly looking for new solutions to improve the results of their students and to make learning relevant for the future: ‘they were striving to develop students who were both academically successful, in relation to New Zealand education standards and qualifications, as well as confident, connected and actively involved learners.’²⁶

High quality data are used predominantly for the main components of education:

1. Teacher – being a great teacher has long been perceived as an inborn ability. Quality teaching has been examined by Eric Hanushek, an economist at Stanford University. He has established that during a school year ‘pupils taught by teachers at the 90th percentile for effectiveness learn 1.5 years’ worth of material. Those taught by teachers at the 10th percentile learn half a year’s worth.’²⁷

Hattie goes deeper as far as an expert teacher is concerned and provides a list of 16 prototypic attributes of a great teacher. According to Hattie expert teachers adopt a problem-solving stance to their work, are proficient at creating an optimal classroom climate for learning, are proficient at creating an optimal classroom climate for learning, Expert teachers have a multidimensionally complex perception of classroom situations, are more adept at monitoring student problems and assessing their level of understanding and progress, and they provide much more relevant, useful feedback. Those teachers have high respect for students, are passionate about teaching and learning. They engage students in learning and help to develop their students’ self-regulation, learning skills, self-efficacy, and self-esteem.²⁸

In order to facilitate quality teaching the Australian Department of Education and Training has developed the *High Impact Teaching Strategies* (HITS). These are 10 instructional practices that emerge from the findings of international researchers like John Hattie and Robert Marzano. The strategies give ‘teachers and school leaders an opportunity to embed and share the use of successful instructional practices.’²⁹

Another helpful tool which enables teachers to share their practice-based evidence is at the *Australian researchED* (Australian College of Educators, 2017), which started at the Australian Council for Educational Research (ACER) Excellence in Professional Practice Conference (ACER, 2017).³⁰ This platform allows practitioners to publish their findings, share their way of thinking and helps ‘great practice become common practice.’³¹

²⁶ *Ibidem*, p. 16.

²⁷ *Teaching the teachers.*, <https://www.economist.com/briefing/2016/06/11/teaching-the-teachers>.

²⁸ J. Hattie, *Distinguishing Expert Teachers from Novice and Experienced Teacher*, https://research.acer.edu.au/cgi/viewcontent.cgi?article=1003&context=research_conference_2003.

²⁹ *High Impact Teaching Strategies. Excellence in Teaching and Learning*, p. 7, <https://www.education.vic.gov.au/school/teachers/teachingresources/practice/improve/Pages/hits.aspx>.

³⁰ Australian Council for Educational Research, <https://www.acer.org/au>.

³¹ M. Deeble, T. Vaughan, *An evidence broker for Australian schools*, Centre for Strategic Education, Victoria 2018, p. 13.

New Zealand's Education Review Office (ERO) helps teachers cooperate with parents and the local community by informing and explaining the complexity of the education process.

To help every student make progress, teachers have to find out what each student knows and can do. Teachers want to build on the strengths of each of their students. This involves teachers constantly reviewing their teaching practice – is it working, and what changes are needed?.³²

Moreover, the Office clarifies the nature of best teachers: Effective teachers are flexible and responsive to all their students, use different teaching approaches for students who need extra support or extensions, draw on the support and expertise of other adults to help with some of their students, and also use the expertise of community members.³³

2. Learner – it is worth remembering that according to Hattie on about 50% of the variance of student's achievement is due to the student him/herself. This refers mainly to the student's prior knowledge and abilities. Recent improvements in the Australian education system have been led by David Gonski who was assigned his job in 2010 by the Minister of Education. Later, the proposed reforms and funding model became known as "Gonski". The second Gonski report, referred to as Gonski 2.0, was published on 30 April 2018. Gonski is aware that *'learning is unlikely when people are taught what they already know or when they lack the prerequisite knowledge or skills for success'*.³⁴ Gonski's model looks at successful learning from a totally different angle – *'rather than being judged only in terms of age-based expectations, successful learning would be measured as the progress individuals make, whatever their starting points'*.³⁵

3. Curriculum – the shape of the present Australian Curriculum was approved by the Australian Curriculum Assessment and Reporting Authority (ACARA) Board in 2012. The Curriculum undergoes systematic evaluation by ACARA.³⁶ This government institution is collecting feedback and analysing data on curriculum's effectiveness by reporting these findings to the government and public every year.³⁷ The ACARA Board determines if any newest findings require further evaluation and change in the curriculum. For instance, in 2014 as a result of the review of the Australian

³² *Effective Teaching What's happening in my child's classroom?*, p. 2, <https://www.ero.govt.nz/assets/Uploads/Effective-Teaching.pdf>.

³³ *Ibidem*, p. 5.

³⁴ G. Masters, *Gonski, learning and the case for change*, <https://www.teachermagazine.com.au/columnists/geoff-masters/gonski-learning-and-the-case-for-change>.

³⁵ G. Masters, *Gonski's model for schools*, <https://www.teachermagazine.com.au/columnists/geoff-masters/gonskis-model-for-schools>.

³⁶ "Primary Matters" 2014, Issue 2, http://docs.acara.edu.au/resources/20140710_Primary_Matters_issue_2.pdf.

³⁷ *Monitoring the effectiveness of the Foundation – Year 10 Australian Curriculum Annual Report*, https://www.acara.edu.au/docs/default-source/curriculum/20180122_2017-monitoring-report.pdf.

Curriculum the federal government recognised a problem of overcrowded curriculum. Later on vital steps were taken leading to curriculum improvement (March 2015 meetings of education ministers, 12–13 March 2015 cooperation of practising primary teachers from around the country with ACARA officers to provide input and feedback on options for reducing, redesigning and rebalancing the curriculum for primary schools).³⁸ The Australian Curriculum consists of the three dimensions – learning areas, general capabilities and cross-curriculum priorities. Each school has the right to create its own unique way of using the dimensions as they implement the Australian Curriculum.

In 2010, around the same time as in Australia, schools in New Zealand were obliged to implement The New Zealand Curriculum.³⁹ There are eight principles of The New Zealand Curriculum. The principles are for example: High expectations, Learning to learn, Future focus.⁴⁰ The Ministry of Education assigned ERO to regularly evaluate the extent to which the principles of The New Zealand Curriculum are present in schools' curricula and applied in classrooms.⁴¹ Similarly to Australia, The New Zealand Curriculum permits all schools to

‘design their own learning programmes to meet the needs of their communities and students. Every school’s curriculum should be a unique and responsive blueprint of what they and their community consider is important and desirable for students to learn. The vision, values, principles and key competencies of The New Zealand Curriculum provide a framework for stakeholders to engage in discussion about the kind of people they want students to be, and the best means to support students to develop their potential’⁴².

Both Australian and New Zealand schools practice curriculum connection. It is considered to be ‘effective in stimulating effective collaboration between teachers and students at many levels. It is distinctive from a thematic approach in that it consciously maintains the rigour of each of the learning areas. It clearly empowers the learning through connections and does not lose the integrity of the individual subject.’⁴³ Philip Jellyman, the headteacher at St Dominic’s Catholic College in New Zealand, has investigated twelve schools to look for the ways in which curriculum integration has been implemented. He believes that combined curriculum ‘has the potential to

³⁸ “Primary Matters” 2015, Issue 5, http://docs.acara.edu.au/resources/20150420_Primary_Matters_Issue_5_2015.pdf.

³⁹ *The New Zealand Curriculum Principles: Foundations for Curriculum Decision-Making*, <https://www.ero.govt.nz/assets/Uploads/Curriculum-Principles-2012.pdf>.

⁴⁰ *Annual Report 2017/18*, p. 3, <https://www.ero.govt.nz/assets/Uploads/ERO-Annual-Report-2018.pdf>.

⁴¹ *Ibidem*.

⁴² *Ibidem*.

⁴³ “Primary Matters” 2017, Issue 11, <https://www.acara.edu.au/curriculum/primary-matters-newsletter/primary-matters-may-2017>.

enhance student learning and competencies beyond what is generally possible in subject specific lessons'.⁴⁴

Conclusions

New Zealand's and Australia's education systems have reformed education not by implementing structural changes in the system itself, but by putting an emphasis on a new and innovative perception of what education and education improvement is. A vital element in this process was development of research on Evidence Based Teaching and in particular the concept of Hattie's Visible Learning. Visible Learning is the key to understanding the changes that are taking place. It does not mean, however, that this concept is uncritically supported⁴⁵, but undoubtedly it makes the pedagogical interaction not only visible but also effective. And this is the direction that New Zealand's and Australia's educational systems are heading – to encourage teachers to see what they can do and how it works for the students. In a longer perspective it encourages teachers to modify their own activities.

I believe the improvements and changes in Polish educational system should and can be based on evidence. Scientists and practitioners should establish closer cooperation in order to find and analyse quantitative and qualitative data. The shape and direction of the changes in the Polish system of education need to be made on the basis of high quality evidence. But foremost there needs to be a different way of looking at the two participants of the education process: the learner and the teacher. The learner should be encouraged by schools to become a more proactive participant. The teacher's role should be to 'bring up' all the student's assets.

That may be the key to quality teaching.

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