The book starts with Chapter 1 followed by eight additional chapters within three overall parts: **Part 1**: *The source of ideas and the role of teachers*; **Part 2**: *The lessons*; and **Part 3:** *Mind frames*. These notes highlight key points in the chapters. The headings that are underlined and bolded follow the author’s outline in the chapters.

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| **Chapter 1: Visible learning inside** |
| This chapter introduces the basic concepts of visible learning, the outcomes of schooling, and the outline of the chapters. (*Visible Learning for Teachers: Maximizing impact on learning* is designed to elaborate on his previous work, in Hattie, J.A.C., *Visible Learning*: *A synthesis of 800+ meta-analyses on achievement,* (2009), London: Routledge.  **Visible Learning Inside**: Hattie makes the analogy between the computer world and education world by stating the “software” (programs in schools) and “hardware” (buildings and resources) has been the traditional focus of discussion and debate in education. He believes the focus on schools should be similar to the “Intel inside” concept - what are the attributes of school that make the most difference in student learning?  The “visible” part of visible learning is about making student learning visible to teachers as well as making teaching visible to students. The “learning” part of visible learning is about taking what we know and making it applicable to student learning.  In his previous work, Hattie demonstrated that everything works if the criterion of success is just enhancing achievement. In teaching and learning, he claims that the bar in often set inappropriately low. Hattie sets the effect size at 0.40 (the average effect size identified in the meta-analyses in his previous book).  0.40 is what is referred to as the *Hinge-Point* for identifying what is and what is not effective.  **Outcomes of Schooling:** The best predictor of success in later life is the number of years in schooling, not school achievement.  Therefore, Hattie makes the argument that we are focusing too much on school achievement and not enough on critical evaluation skills.  Critical evaluation skills are defined as “ . . . citizens with challenging minds and dispositions, who become active, competent, and thoughtfully critical in our complex worlds.”  ***Nice to know:*** This book is structured around the ideas presented in Hattie’s previous work and are structured in a sequence of decisions that teachers are making.  This includes preparing, starting, conducting, and ending a lesson.  Included in each chapter is a set of checklists for schools to evaluate their level of visible learning. |
| ***Part 1: The source of ideas and the role of teachers*** |
| **Chapter 2: The source of ideas** |
| This chapter discusses the evidence base for Visible Learning (2009); it elaborates on the “barometer” or hinge point; and provides an explanation of a simple theme that synthesizes the evidence base, namely the concept of visible teaching and learning.  **The evidence base** for the main implications discussed in the book was derived from over 900+ meta-analyses. More than 800 of the meta-analyses formed the basis of the book (52,637 studies, about 240 million students, which provided 146,142 effect sizes about the influence of some program, policy, or innovation on academic achievement in school. Appendix A and B sum up this evidence.)  For each meta-analysis, Hattie created a database of the effect size and related information.  He was also looking for a “moderator” or whether the effect differed across ages, subjects, quality.  One major theme is that when teachers and schools evaluate the effect of what they do on student learning, we have “visible learning inside”.  It is not necessarily the program or the innovation; *it is the evaluation of its effect that is powerful*.    The overall average effect from the meta-analyses described was d = 0.40.  He created a visual barometer to show the importance of low, medium and high effect sizes.  After looking at 50,000 effect sizes, he concluded that almost anything works.  So what can be considered a positive effect? He argues that .40 is the approximate normal distribution of all the studies and is thus the “hinge point” or what we can reasonably aim for as having a positive effect on achievement.  It is also close to the average effect we can expect from a year’s schooling. (**Appendix E** covers how to calculate effect sizes.)  **Visible teaching and learning** is explained as the “story” summing up all of the research. “Visible teaching and learning occurs when learning is the explicit and transparent goal, when it is appropriately challenging, and when the teacher and the student both (in their various ways) seek to ascertain whether and to what degree the challenging goal is attained” (p. 14).  Hattie argues that it is critical that teachers have a mind frame where they ask themselves about the effect they are having on student learning or, in other words, that teachers need to see themselves as evaluators of their effects on students.  Teachers who are students of their own impact are the teachers who are most influential in raising student achievement.  This is the source of the theme for the book, “know thy impact”.    ***Nice to know:*** There is an excellent exercise for teachers and parents provided at the end of the chapter (pp 20-21).  It gives a list of 31 influences (e.g. “ability grouping”; phonics instruction reducing class size) and asks participants to rate if the impact on student achievement is high, medium or low.  The answers are provided in Appendix D p. 269. |
| **Chapter 3: Teachers: the major players in the education process** |
| This chapter begins by arguing that too much emphasis is placed on the students (e.g. their attitude, learning style, families and backgrounds) and on why we can or cannot have an effect on their learning. Rather, educators must consider themselves positive change agents. “ . . . teacher’s beliefs and commitments are the greatest influence on student achievement *over which we can have some control . . .”* (p. 22).  A major claim of the chapter is “differences between high-effect and low-effect teachers are primarily related to the attitudes and expectations that teachers have when they decide on the key issues of teaching.” Richard Jaeger and Hattie reviewed the literature on the distinctions between expert and experienced teachers (versus the more common distinction of experienced and novice teachers) and found five major dimensions of excellent, or “expert” teachers. **Expert teachers can identify the most important ways in which to represent the subject that they teach**. Data from Hattie (2009) showed that teachers’ subject matter knowledge had little effect on the quality of student outcomes. They also found that expert and experienced teachers do not differ in the amount of knowledge they have about curriculum and teaching strategies, however expert teachers differ in how they *organize and use the content knowledge* – it is more integrated. Finally, expert teachers can quickly recognize sequences of events in classrooms that in some way affect the learning and teaching of a topic.    **Expert teachers are proficient at creating an optimal classroom climate for learning.** Expert teachers generate an atmosphere of trust between teacher and student and between student and student. This atmosphere makes it ok to make mistakes – they are the essence of learning. Expert teachers expect everyone (teachers and students) to be involved in the process of learning. In expert teacher’s classrooms, student questioning is high and engagement is the norm.  **Expert teachers monitor learning and provide feedback.** Expert teachers (versus experienced teachers) are excellent seekers and users of feedback information about their teaching. They are very skilled at monitoring the current status of student understanding.  **Expert teachers believe that all students can reach the success criteria.** Expert teachers have a belief that intelligence is changeable rather than fixed. They have a high amount of respect for their students.  **Expert teachers influence surface and deep student outcomes.** Expert teachers set challenging goals, rather than ‘do your best goals’. The fundamental quality in expert teachers is the ability to have a positive influence on student outcomes (beyond test scores). A study comparing National Board certified teachers (“expert teachers”) with teachers who had applied for, but did not become, NBCs (“experienced teachers”) was conducted. There were major differences in the means of the two groups across all dimensions. But the key difference was in the proportion of surface and deep understandings of the students. Surface level achievement outcomes were fairly similar among the two groups; however students of expert teachers are much more adept at deep understanding (i.e. more integrated, more coherent, and higher level of abstraction). The ultimate requirement is for teachers to develop the skill of evaluating the effect they have on their students and to know what that impact is.  ***Nice to know:*** (1) Measures of Effective Teaching Project, (Gates Foundation, 2010), see pages 27-28, showed the differences in students’ views of high-value and low-value teachers on 7 factors (the 7 C’s): care, control, clarify, challenge, captivate, confer, consolidate. (2) The seven exercises at the end of the chapter provide activities for teachers to examine their teaching and how they can enhance it. Several of the activities involve gathering information from students. They are well suited to a PLC format. |
| ***Part 2: The lessons*** |
| **Chapter 4: Preparing the lesson** |
| This chapter looks at planning lessons and how teachers can work together. Planning is most powerful when teachers work together to develop plans, common understandings, define beliefs around challenge and progress and evaluate the impact of their planning on student outcomes. The chapter identifies four critical parts in planning (1) levels of performance at the start or prior achievement; (2) desired level of performance at the end or targeted learning; (3) rate of progress from the start to the end or progression; and (4) teacher collaboration and critique in planning.  **Prior Achievement** is a powerful predictor of future achievement (d= 0.67). “What a student brings to the classroom each year is very much related to his or her achievement the previous years; brighter students tend to achieve more and not-so-bright students achieve less. Our job as teachers is to mess this up, by planning in a way in which to accelerate the growth of those who start behind, so that they can most efficiently attain the curriculum and learning objectives of the lesson alongside the brightest students.” p. 42. Prior to planning the lesson, teachers need to know what students already know and their strategies for thinking.  The self-attributes that students bring to the lessonand that teachers should pay attention to are:   1. Self-efficacy or the confidence or strength of belief that we have in ourselves that we can make our learning happen. 2. Self-handicapping or when students choose impediments or obstacles to performance that allow them to deflect the cause of failure away from their competence towards the acquired impediments. 3. Self-motivation (intrinsic or extrinsic) is the learning itself the source of satisfaction (intrinsic) or are the perceived rewards the sources of satisfaction (extrinsic)? 4. Self-goals can be mastery which are aimed at developing competency, growth mindset, focus on effort; or performance goals which are the aim to out do peers; or social goals which are centered on interactions with others. 5. Self-dependence occurs when students become dependent on adult direction. 6. Self-discounting and distorting occurs when student’s dismiss information such as praise, feedback or punishment. 7. Self-perfectionism takes many forms such as “all or nothing”; a demand for perfect resources/blame resources when failure occurs; or expects achievement will not occur and feels powerless to change the situation. 8. Social comparison is when students use others as a comparison to explain or enhance their self- concept.   “When students invoke learning rather than performance strategies, accept rather than discount feedback, set benchmarks for difficult rather than easy goals, compare their achievement to subject criteria rather than that with the other students, develop high rather than low efficacy to learning, and effect self-regulation and personal control rather than learned hopelessness in the academic situation, then they are much more likely to realize achievement gains and invest in learning. These dispositions can be taught; they can be learned”, p. 46.  **Targeted Learning** describes what we want students to learn and what success looks like. *The learning pathways must be transparent for the student.* “A key issue is that students often need to be explicitly taught the learning intentions and the success criteria” p.48.  **Five Components of Learning Intentions and Success Criteria**:  Hattie states there are five essential components of the learning equation as it relates to learning intentions and success criteria: challenge; commitment; confidence; high expectations; and conceptual understanding. Challenge is one of the core ingredients of effective learning, but it is difficult as it is so individual. The art is making the challenge appropriate to the student. Commitment refers to a student and teacher’s determination to reach a goal, commitment is not as important as challenge, commitment is more powerful when it relates to investing in challenging tasks. Confidence is important in the learning equation from both students and teachers as confidence can lead to resilience, particularly in the face of failure. Expectations should be high but appropriate.  **The Curriculum: what should be taught, choices of resources and progress:** What knowledge and understanding should be taught? What is important and what is going to lead to the greatest student understanding? Choose resources to keep it one notch above the current mean for at least half of the group. Progression is what it means to be good at a subject.  **Teachers Talking to Each Other About Teaching** is one of the major messages from the meta-analyses done in Visible Learning (2009). “Sharing a common understanding of progression is the most critical success factor in any school; without it, individualism, personal opinions, and ‘anything goes’ dominate (usually in silence in staffrooms, but living and aloud behind each closed classroom door)” p. 60. We need successful ways to share discussion around progression. Some include:  (1) Data Teams which are small teams at the grade level, building level, curriculum or department level and even systems level that disaggregate data, analyze student performance, set goals, discuss explicit/deliberate instruction and plan to monitor student learning and teacher instruction. These are one of the most successful according to Hattie.  (2) Coaching is deliberate action to help adults get results from. Coaches can “serve as suppliers of candor, providing individual leaders with the objective feedback needed to nourish their growth. “ p. 71 “It is not counseling for adults; it is not reflection; it is not self-awareness; it is not mentoring or working alongside. Coaching is the deliberate action to help the adult to get the results from the students- often by helping teachers to interpret evidence about the effect of their actions and providing them with choices to more effectively gain these effects.” p. 72  (3) Direct instruction is a well-known method of getting teachers to talk to each other about teaching. Direct Instruction is not only effective in maximizing impact but also serves to help the teacher engage in productive conversations about teaching. It is powerful in that teachers can come together to design and evaluate their lesson planning as well as lesson scripts.  ***Nice to know:***  The exercises at the end provide structured activities for diving deeper into co-planning and examining student attributes. |
| **Chapter 5: Starting the lesson** |
| This chapter looks at the need for setting the right climate for learning and examines the various studies on the ‘flow’ of a lesson from the student’s perspective and how teachers can contribute. Conditions for optimal learning, the proportion of teacher and student talk, teacher knowledge of the students, and choice of teaching methods were identified as fundamental premises that lead to this flow.  **The climate of the classroom** is identified as one of the more critical factors in promoting learning.Hattie talks about the need for safety to learn, a sense of respect and fairness, and a predictable environment. Research cited includes Bryk and Schneider’s (2002) notion of “relational trust” and how the higher the level of relational trust, the greater the improvement on standardized test scores.  **Teachers talk, talk, and talk** “Teachers talk between 70-80 percent of class time, on average." Teachers talking increases as the year level rises and as the class size decreases” p. 80. This section gives research on how highly effective teachers listen more and talk less than other, less effective teachers. Observation research by Hardman, Smith, and Wall (2003) saw direct evidence that highly effective teachers have more general class talk (students ask questions and give answers spontaneously) and less directive talk (answer only when asked a question by the teacher).  “The more important task is for teachers to listen. It demonstrates to students that teachers are the owners of the subject content, and controllers of the pacing and sequencing of learning, and it reduces the opportunities for students to impose their own prior achievement, understanding, sequencing, and questions” p. 82.  **Questions** “Teachers ask so many questions. Bruald (1998) counted 200-300 per day…and the majority of these are low-level cognitive questions: 60 percent recall facts; 20 percent are procedural” p. 83. Teachers ask questions to keep the flow of their presentation, to keep students engaged and attentive, and to see if students are keeping up. Often, students are given too little process time to adequately answer questions that are asked. Research by Rich Mayer and Colleagues (2004, 2009) demonstrated that when asked for immediate feedback throughout a lecture, students attend more readily, and the teacher teaches differently because they have to prepare ahead of time for what questions to have the students respond to.  **Proportions of surface, deep and conceptual understanding** “What is needed is a balance between surface knowledge and deeper processes, leading to conceptual understanding” p. 86. Teachers tend to spend more time on surface level learning, and their outcomes, evaluations, and student behavior reflect this. Students know that if they “cram” for the test, they will likely be successful due to the heavy emphasis on just learning the facts. The author concludes that a “major shift” needs to occur from this over-reliance on surface level learning.  **The role of peers and social support** “The effects of peers on learning is high (d= 0.52) and can be much higher indeed if some of the negative influences of peers is mitigated. Peers can influence learning by helping, tutoring, providing friendship, giving feedback, and making class and school a place to which students want to come each day” p. 87. Students need to have a sense of belonging in school, and highly skilled teachers use peers to learn from and encourage each other in the learning process. Both cooperative learning groups and becoming their own (or a peer’s) teacher are explored in this section.  **Know the kids and let go of the labels** “Teachers need to stop overemphasizing ability, and start to emphasize increased effort and progress (steep learning curves are the right of all students regardless of where they start); they need to stop seeking evidence to confirm their prior expectations, but rather seek evidence to surprise them and find ways in which to raise the achievement of all” p. 92.  Teachers tend to predict quite reliably how much gain students will achieve in their classrooms—and whether they have high expectations or low expectations will show in these predictions. We must make our expectations challenging for all students (regardless of perceived ability), and ensure that they are reasonable and can be evaluated.  Students are very good at making predictions about their score or grade, in *Visible Learning* it was the top ranked effect related to student expectations (d=1.44). Students tend to set safe predictions for themselves, that is maximum grade for minimum effort. Hattie argues it is our job to raise those expectations for students.  **Choice of teaching methods.** A strong message from the *Visible Learning* research was“when students do not learn, they do not need ‘more’; rather, they need ‘different’” p.93. Hattie argues that we spend too much time arguing about the teaching method (e.g. direct instruction, constructivism, cooperative versus individualistic teaching) and not enough time on the impact on student learning. “The message is not to choose a top teaching method, but to choose a method and then evaluate its impact on student learning” p. 94.  ***Nice to know:***  Table 5.1 on p.95 summarizes the effect sizes from various programs (e.g. reciprocal teaching, study skills, concept mapping, etc.). |
| **Chapter 6: The flow of the lesson: learning** |
| This Chapter is about learning, how to make it visible, and how to develop it. The key Ideas of the chapter are (1) the overall aim of the teacher is to make learning visible for the student; (2) there are many phases of learning; and (3) we need to move attention from “how to teach” to “how to learn”.  **Various Phases of Learning** Student learning starts with “backward design”... it starts with the teacher knowing the desired results and then working backwards. The purpose is to reduce the gap between where the student starts and the success criteria for the lesson. There are four overlapping considerations in learning (capability, capacity, catalyst, competence).  *Phases of thinking*: As students encounter ideas, they relate and extend those ideas. Student’s ability to relate and extend depends on their knowledge level of the ideas that are expected to be related and extended. Merely learning to ‘enquire’ without embedding that enquiry in a rich basis of ideas is not a defensible strategy.  *Phases of motivation*: Students do not remain in a constant state of being motivated.  *Gap:* Students need to see a gap between what they know and the intended learning, then plan and set a goal to close the gap.  *Phases of how we learn:* (Novice, Capable, Proficient) Novice learner is when the student tries to understand the requirements of the activity and generate ways forward without making mistakes. Capable learners minimize errors; performance improves, and no longer need to focus intently on each part of the task. Proficient learners become automated in reactions to newer ideas, need less effort to execute the task, in some ways become less able to control the execution of the skill(s).  *Differentiated learning*: structuring the class so that all students are working ‘at or +1’ from where they start. Hattie argues that grouping is not well understood; the aim is to group by a mixture of those at and those +1 above so that peer mediation can be part of moving all forward.  **Adaptive Experts** “It is not *routine expertise* we want, rather, it is *adaptive expertise*” p. 112. Routine expertise is when teachers aim for what is wanted and aims to get there, using teaching methods that have worked for them before. When these methods do not work, many students are left behind. Teachers who are adaptive experts “listen for when the learning is occurring so that they can work out the point at which to intervene (or not) to advance the learning” p. 112.  **Learning Strategies** Teachers are able to teach multiple ways of knowing and multiple ways of interacting, and provide multiple opportunities for practice. Hattie provides a chart that summarizes the various meta-cognitive strategies (e.g. self-instruction, help seeking) and their effect sizes; see Table 6.2 on p. 117.  **Backward Design** Hattie states that one of the best ways to maximize learning is to use backward design. Teachers use principles from backward design to assist in moving from outcomes (success criteria) back to the learning intentions, then to the activities and resources needed to attain the success criteria.  **Learning requires two major skills**, deliberate practice and concentration or persistence. Deliberate practice is simply doing some things many times over. Although not always fun, it is necessary to obtain competence and is the job of schools to teach students the value of deliberate practice. To engage in deliberate practice, students need persistence or the ability to concentrate. Quality of the time is more important than the quantity.  **How to see learning through the eyes of students** There are three worlds in the classroom, public (all see), semiprivate (peer relationships between students) and private (in the student’s head). A teacher does NOT see 70% of what happens in a classroom. Teachers need to pay attention to evidence about the effect that they have on students, and make adjustments to their own thinking, teaching, expectations, and actions on this evidence.  Angus (2009) conducted a study that measured student engagement found four main types of groups of student behavior in class: (1) 60% of students were behaving productively; (2) 20% of students were disengaged but not aggressive or non-compliant; (3) 12% of students were uncooperative, aggressive, and non-compliant; and (4) 8% of students were low-level disruptive with a mix of disruptive behavior. The study found that the lowest achieving over the school year of these four groups was the uncooperative, however, the disengaged was not that different. Hattie argues that the disengaged are the easiest to re-engage with and should be the focus of the teacher.  ***Nice to know:***  Excellent application exercises at the end of the chapter that leads teachers through digging deeper into this work in their own classrooms. |
| **Chapter 7: The flow of the lesson: the place of feedback** |
| Chapter 7 is about how to make feedback effective for all learners in classroom settings. In *Visible Learning*, Hattie found that feedback has a .79 effective size on student learning.  This percentage is two times the average of all other schooling effects on learning. However the influence feedback has on students is variable due to the effectiveness of the feedback.  **Three feedback questions** First, teachers must have a clear idea where students are in their learning to be able to reduce the gap of where they need to be. Hattie suggests three key questions that students need to ask (1) Where am I going; what is my learning goal? (2) How am I going to get there; what are the steps along the way? How am I progressing? (3) Where do I go next?  The three feedback questions work at four levels, which correspond, to the levels of learning (novice, proficient and competent).  1.    Feedback at the **task level** is powerful if it is information focused and builds upon background knowledge.  2.    Feedback at the **process level** is aimed at the process that helped the student complete the task. It helps the student develop learning strategies, detect errors, and connect ideas. Feedback at this level deepens knowledge.  3.    Feedback at the **self-regulation level** helps students learn to self-monitor. This strategy is built around probing and reflective questions.  4.    Feedback at the **self-level** is the praise level used to comfort or support, which is welcomed by students. The importance here is to keep feedback and praise separate to as not to water down the power of feedback.  Research indicates that praise has little effect on students who are already successful.  But for those students who are unsuccessful it may encourage helplessness.  **Frequency of feedback** Studies on amounts of feedback vary. One study, Carless (2006), showed that 70 percent of teachers said they gave specific feedback to help students improve their next assignments. However the study also showed that only 45 percent of students agreed with their teacher’s claims, p.138.  **Types of feedback** Feedback is most effective when students do not have proficiency or mastery. Errors invite opportunities and should be welcome. Classroom climate should supports student risk taking. Rapid formative assessment is the most recent form of feedback gaining attention today along with systematic and explicit instruction.  Leahy and Williams (2009),“When formative assessment practices are integrated into the minute-to-minute and day-by-day classroom activities of teachers’ substantial increases in student achievement…. are possible” p. 143-144. Teachers who use prompts as a precursor to receiving feedback (e.g. organizational prompts, elaboration prompts, monitoring progress prompts, see Table 7.2 on p. 145) can invoke feedback from many sources. Hattie states that there is an exciting future for research in feedback, not only how to embed “best fit” feedback into instruction, but also how to scaffold and evaluate it. |
| **Chapter 8: The end of the lesson** |
| This chapter is about interpreting the impact of the lesson after it is over. Hattie argues that the focus should be on students and how well learning occurred.  **The lesson experience from the student’s perspective** Students much be engaged in the learning and to do that teachers need to ‘invite’ students to learn.  This is done in the lesson by conveying respect, trust, optimism and intentionality. Hattie says the essence of a student-centered teacher is fourfold: (1) warmth; (2) trust; (3) empathy; and (4) positive relationship. “The notion of how the student experiences the lesson is critical to engagement and success in participating in learning – more so for adolescents than for elementary students (who are more content to be ‘busy’)” p. 157.  **The lesson experience from the teacher’s perspective** Hattie summarized a study by Wilson and Corbett (2007) where the researchers asked students, who were not strong classroom performers, what they wanted out of a teacher.  Results showed they were interested in six major characteristics: (1) someone who stayed on with students to complete their assignments; (2) someone who was able to control student behavior without ignoring the lesson; (3) someone who went out of his or her way to provide help; (4) someone who explained things until the “light bulb went on” for the whole class; (5) someone who provided students with a variety of ways through which to learn; and (6) someone who understood students’ situations and factored that into his or her lessons. p. 159.  **The lesson experience from the curricular perspective** The critical part when evaluating a lesson is reviewing the learning intentions and success criteria. Hattie suggests asking colleagues critique your learning intentions and success criteria alongside examples of student work, as deeper reflection occurs when teachers process their work with others rather than independently.  Some key questions to ask at the end of a lesson:   * Did the students know the critical pieces of the lesson at the end of the lesson? * Could they articulate them in a manner that demonstrated that they understood? * Did they see the learning intentions and success criteria as appropriately challenging   Hattie suggests using the work diary talked about in Ch 4 to help to look back on how the students experienced the lesson.  **The lesson experience from a formative and summative perspective** Formative and summative do not have anything to do with tests, they refer to the time at which the test is administered and interpretations made from the test. If information is used during a lesson to modify instruction, it’s formative; if it is used at the end to sum up learning, it’s summative. When considering effectiveness, efficiency should also be considered.  Could another learning strategy have lead to less time, less effort, reduced error rates and opportunities for the further development of a multiplicity of strategies?  ***Nice to know:*** The activities at the end of the chapter provide ways to improve end of lesson follow-up, including the use of the Invitational Teaching Survey, which allows teachers to see how inviting their students see them and their lessons. |
| ***Part 3: Mind frames*** |
| **Chapter 9: Mind frames of teachers, school leaders, and systems** |
| Chapter 9 summarizes the message of the book, which is that teachers, schools and systems need to be consistently aware and have evidence of the impact they are having on their students. The chapter looks at implications for each of these levels (systems, schools, teachers) and makes the case for having all school staff of a similar mindset as to what needs to get done.  **A model for systems** One of the roles of the system is to provide direction, along with resources to enable schools to know their impact. Hattie argues that this is does not mean more tests, schools have plenty of tests and data that just lead to more summative interpretations when they need more formative interpretations. New Zealand has now asked that in professional development sessions, they must demonstrate an agreed effect size gain.  **A model for school leaders** Hattie argues that the role of school leaders is to support teachers in obtaining a higher level of impact on student learning. The focus should not be on ‘was it taught’ but on ‘did the students acquire the learning or skill’? Another key role is to orchestrate the learning of the adults in the school by focusing on things we know have an impact on student achievement, such as coaching; use of data teams; focus on how students learn subject matter content; and teacher collaboration, p. 175.  **Eight mind frames** The mind frames summarize that the impact teachers can make on student learning starts with how we think. They are based on research and ideas discussed in Chapters 1-8. The mind frames are:   1. Teachers/leaders believe that their fundamental task is to evaluate the effect of their teaching on students’ learning and achievement 2. Teachers/leaders believe that success and failure in student learning is about what they, as teacher or leaders, did or did not do . . . We are change agents! 3. Teachers/leaders want to talk more about the learning than the teaching 4. Teachers/leaders see assessment as feedback about their impact 5. Teachers/leaders engage in dialogue not monologue 6. Teachers/leaders enjoy the challenge and never retreat to ‘doing their best’ 7. Teachers/leaders believe that it is their role to develop positive relationships in classrooms/staffrooms 8. Teachers/leaders inform all about the language of learning   This book is asking for change in the way we think about the role of teaching, as well as collaboration and commitment to evaluating the impact on student learning. “It also means that there is a powerful criterion of success for all of our teachers and schools leaders – that is, that success is learning from evaluating our effect. You can all do this . . . You can focus . . . You can deeply implement . . . You can know thy impact” p. 192.  ***Nice to know:*** Appendix A has an excellent checklist for school personnel to look at each of the concepts outlined in the chapters. The checklist could be used alone or in combination with a book study of the chapters. |