<table>
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The author seeks to define the critical attributes of a reflective teacher by posing a series of questions. He claims that if each teacher educator were to respond to the questions they would better come to understand their personal assumptions related to reflection in teaching. The author’s responses to the questions are based on his own experience as a teacher educator and draw on specific examples.  
Main Arguments:  
The questions and the author’s own responses are as follows:  
- “How does a teacher know when reflection is productive?” – “…when it leads to changes in practice that may or may not be retained but that result in a better personal understanding of one’s practice.”  
- “How does an observer recognize a reflective teacher?” – “only by investing considerable time in observation and discussion…with a view to listening for puzzles and dilemmas, for re-thinking of assumptions and beliefs, and for evidence that these are taken into the practice setting.”  
- “Is a reflective teacher a good teacher?” – “…we are more likely to understand reflection if we keep it separate from the elusive and time-worn issue of what represents ‘good’ teaching.”  
- “How is a weak reflective teacher different from a strong un-reflective teacher?” – “here there is no simple reply…there are at least three issues involved here: quality of teaching (as perceived by pupils and by observers), quality of reflection (based on spoken and written words and on observations of practice), and consistency - the extent to which one’s teaching practice matches one’s beliefs and self-perceptions.”  
- “Can a teacher whose practices never change be said to be reflective?” – “probably not”  
- “Is a teacher who can articulate principles of practice being reflective?” – “Yes, - if the principles of practice match the practice rather than personal beliefs about the practice.”  
- “Does being reflective mean thinking about one’s teacher, or does it require doing something about one’s teaching?” – “…being reflective serves little purpose if it does not involve, in central and essential ways, changes to teaching as well as development of thinking about teaching.”  
- “Can one be a reflective teacher while denying all interest in reflection?” – “…it seems possible but improbable.”  
- “Can reflection help the weak teacher improve?” – “We assume that beginners learn to teach by being told how to teach… We also assume that practical experience in schools leads directly to learning how to teach.” In the case of the weak teacher…”rather than questioning our medium of communication or our assumptions about how one learns to teach, we conclude that the weak student teacher failed to take the advice offered…” An alternative interpretation would be that the weak teacher has not seen the connections the observer has seen to their practice and needs substantially more help than we generally offer in learning how to reflect on their teaching. |

Grade 9 students in a large urban school district were given a standardized reading test three times in a year and the results were investigated to examine potential correlations between progress and 1. Teacher experience 2. Teacher qualifications and 3. Teacher Race. |
### Main Findings:
- There was a significant difference between classrooms with regard to student progress.
- None of this difference was explained by any of the three teacher variables investigated.

### Teacher Quality

**Dillon, S. (2007) Import from Britain: Ideas to Improve Schools.**
This is not a strictly empirical study. The article reports a comparison made by Sir Michael Barber of school systems around the world.

**Main Findings:**
- All great school systems (including Finland, Singapore, South Korea and Alberta, Canada) have one feature in common - they all recruit their teachers from the top third of university graduates. (US teachers tend to come from the bottom third)
- South Korea attracts teachers with high pay and has accepted large class sizes as a trade-off.
- Finland attracts top-tier graduates because of the exceptionally high public respect for teachers.

### Teacher Quality / Instructional Supervision / Teaching Strategies

This study identified the top and bottom quartiles of teachers in terms of effectiveness in promoting student learning (while controlling for factors such as gender, previous achievement, socio-economic background etc.) and then conducted in-depth case studies of teachers within each of the two categories (most effective and least effective teachers) to see which instructional strategies were most useful in promoting student learning.

**Main Findings:**
- **Instruction**
  - Effective teachers provided more complex instruction with a greater emphasis on meaning than memorization.
  - Effective teachers demonstrated a broader range of instructional strategies, using a variety of materials and media to support the curriculum.
- **Assessment**
  - Effective teachers provided more differentiated assignments
- **Learning Environment**
  - Effective teachers were more organized, with efficient routines and procedures for daily tasks.
  - Behavioral expectations for students were higher in the classrooms of effective teachers
- **Personal Qualities**
  - The effective teachers showed a higher degree of respect for and fairness toward students
- **Teacher Questioning**
  - Effective teachers asked seven times as many higher-level questions as ineffective teachers, though the number of lower-level questions did not vary between the two groups.
- **Student Off-Task Behavior**
  - Effective teachers had incidences of disruptive behavior about once every two hours whereas ineffective teachers had a disruptive event approximately every 12 minutes.

Results can be summarized around three distinct differences: (1) Differentiation and complexity of instructional strategies; (2) questioning strategies and; (3) level of disruptive student behavior.

A study done with graduate students who were supported in engaging in action research projects in their classrooms.

**Main Findings:**
- Participants overwhelmingly found analyzing the data to be the most difficult aspect of engaging in action research.
- Engaging in action research was reported by participants as having a positive impact on the teaching and learning process for both teachers and students, though the direct impact on student learning was reported by participants to be less than the impact on teaching. Researchers believe this is because much of the impact on teaching was reported by participants as being things they felt they could improve for the future.
- The participants overwhelmingly felt that participating in action research and built their confidence and empowered them as teachers, by increasing the amount of regular reflection they engaged in. Reflection helped them understand why students performed better and thus enabled them to make systematic improvements in their teaching.
- Such empowerment allows teachers to implement programs that are best for individual students.


A meta-analysis of studies on retention. For the purposes of the analysis teacher quality was defined as the ability to produce growth in student achievement and based on this definition found that:

**Main Findings:**
- Teacher quality can have a major impact on student achievement.
- There is a wide range of effectiveness among teachers.
- The impact of teacher effects can persist long after students have particular teachers.
- The effects of teacher quality are more dramatic for low achieving students.
- Teacher qualifications, higher degrees and licensure do not correlate highly with student achievement (situations where teachers were teaching very advanced courses and had higher degrees in that particular area were an exception).
- Beyond the first few years of teaching, teacher experience does not correlate highly with student achievement.
- Positive correlations between teachers’ general academic proficiency and student achievement were found in an overwhelming majority of studies investigating this variable.


This study conducted by the Australian National University correlated student scores on standardized tests in literacy and numeracy in years 3 and 5 with information about individual teachers.

**Main Findings:**
- The top 10 percent of teachers from the state of Queensland in Australia are twice as effective as the bottom 10 percent, achieving in 6 months what the bottom 10 percent take a year to achieve.
- Female teachers are more likely to improve student literacy.
- Male teachers are more likely to improve students’ mathematical skills.
- There was no positive effect for teacher qualifications.


Using data from Schools and Staffing surveys in the USA the researchers set out to determine whether principals with stronger academic backgrounds (defined as having attended a more selective university as an undergraduate) hired teachers who also had stronger academic backgrounds.
backgrounds. The premise, based on other studies was that having more teachers with strong academic backgrounds would positively affect student outcomes.

**Main Findings:**
- Overall a principal who attended the most selective university was 2.3 times as likely to hire teachers who also attended highly selective universities.
- In the highest poverty quartile of schools a principal who attended the most selective university was 3.3 times as likely to hire teachers who also attended highly selective universities.
- Researchers surmise that there are other factors at work in the low poverty schools that attract academically gifted teachers.