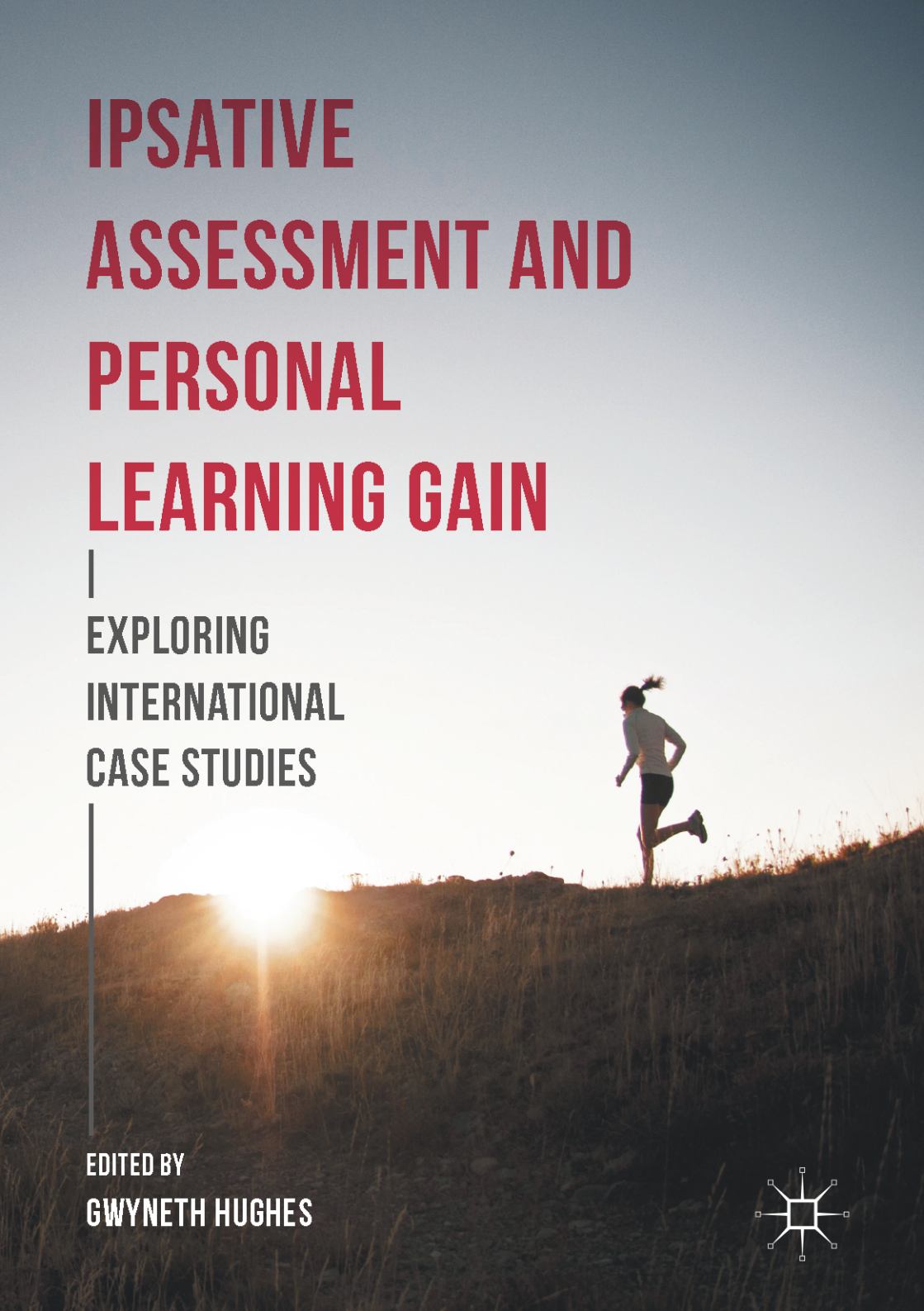
IPSATIVE ASSESSMENT AND PERSONAL LEARNING GAIN

EXPLORING INTERNATIONAL CASE STUDIES



EDITED BY
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Ipsative Assessment and Personal Learning Gain

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Ipsative Assessment and Personal Learning Gain

Exploring International Case Studies

palgrave
macmillan

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ISBN 978-1-137-56501-3 ISBN 978-1-137-56502-0 (eBook)
DOI 10.1057/978-1-137-56502-0

Library of Congress Control Number: 2016951316

Cover illustration: © Cultura RM / Alamy Stock Photo

Printed on acid-free paper

This Palgrave Macmillan imprint is published by Springer Nature
The registered company is Macmillan Publishers Ltd.
The registered company address is: The Campus, 4 Crinan Street, London, N1 9XW, United Kingdom

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Acknowledgements

I wish to thank all the authors who have contributed to this collection for their enthusiasm and willingness to give up their time to write and revise their chapters. I also acknowledge all the people who have recently shared their views on ipsative assessment and personal learning gain with me at various events at Bedfordshire, Greenwich, Roehampton and York Universities as well as my own institution UCL, Institute of Education. Finally, I wish to thank Wendy Smith for helping with proof reading the manuscript and for her tireless encouragement.

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Compete With Yourself (CWY): Maximising Learning Gain in Schools

Sunita Gandhi

Introduction

Using assessment information for summative purposes can have the effect of hindering rather than supporting the learning of some, and in certain cases, all students. The negative effects of assessment for summative purposes on the learners include lowering the self-esteem of the less successful students which can reduce their effort and image of themselves as learners (Davis and Brember 1998; Johnston and McClune 2000; Leonard and Davey 2001; Reay and Wiliam 1999).

This chapter investigates the influence of CWY assessments that are based on the principle of ipsative or self-referential assessment. The term 'ipsative' assessment means comparison with a previous performance, or a self-comparison, rather than with a norm (Hughes 2014). Hughes explores this through two key arguments: (1) that competitive assessment with external standards is not conducive to motivation and learning for all learners, and (2) that the self-referential standards and goals delineated by

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G. Hughes (ed.), *Ipsative Assessment and Personal Learning Gain*,
DOI 10.1057/978-1-137-56502-0_11

ipsative assessment sustain motivation and progress for all learners (Hughes 2011). The CWY assessments do not emphasise comparisons for the individual pupil such as summative averages, norm-referenced percentile scores or age and grade equivalents. Relative comparisons such as these, though useful to a policy maker, administrator and teacher, can be damaging to a pupil's psychology. Evidence suggests a pupil does not put in more effort just because s/he is good or poor in performance in relation to others. The hypothesis this chapter explores is that CWY produces greater excellence than making a distinction relative to the standards of other pupils and school, or national norms.

The CWY assessments provide a snapshot of a class taken at any point of time, or as and when required. The reports provide valuable information that helps personalise learning for every pupil. Teachers undertake corrective action, and they measure their pupils' progress in the next assessment, either whenever the class is ready, or when the individual pupil is ready. The process continues like the double-helix of DNA. When progress between two similar topics or skills is measured, the first assessment serves as a baseline on the basis of which each pupil receives personalised reports and support. The pupil uses these to improve her/his performance using differentiated skills units called Perbooks. Progress assessments that measure every pupil's progress against their personal baseline may be taken using paper and pencil or online, but all CWY reports, personal work plans and selection of personalised study materials are generated on a computer.

The objective of CWY assessment is not classification or judgment of a pupil's ability. The primary purpose is to get objective information at the level of the skill or concept about each pupil so as to help each one succeed even more, not by competing with others, but by competing with themselves. The chapter reports on comparisons of experimental and control groups using CWY methods and tools. The greater increase in class average marks of experimental groups over control groups suggests CWY works better than traditional learning methods and enables pupils to make greater progress.

Doing Away with Summative Assessment?

Is our purpose in assessing pupils to identify talent or develop it? In present education, a derivative of the 19th century, we still suffer from the belief that grades should be used to identify talent. Though at the face value this seems harmless, the implications of this belief are significantly negative.

Summative assessment has become for most students in many countries not a once-a-year event which in comparison with daily interactions with

teachers might be considered to have a minor role in determining their 'faith in themselves as learners' (Stiggins 2001, p. 46), but rather a frequent experience which may have an undesirable effect on motivation for learning. Moreover, research shows that this effect is greater for the less successful pupils and thus tends to widen the gap between higher and lower achieving pupils (Madaus 1991).

There are so many reasons why a pupil puts in less effort, does not want to study or gives up too soon. It is often assumed that a pupil with a poor grade is less capable, or even less intelligent. Differences in learning may not relate to a pupil's innate ability at all, but may be a result of poor teaching, prior experiences, home or classroom environment and the like. These can create a lack of motivation, or the will to put in effort. Harlen and Crick (2002) synthesised nineteen studies and found that with the introduction of the national curriculum tests in England, low achieving students tended to have lower self-esteem than higher achieving students. Prior to the tests, there had been no correlation between self-esteem and achievement. These negative perceptions of self-esteem often decrease students' future effort and academic success.

Evidence indicates that grades and other reporting methods affect pupil motivation and the effort pupils put forth (Cameron and Pierce 1996). No convincing research supports the idea that low grades frequently prompt pupils to try harder. More often, low grades prompt pupils to withdraw from learning. To protect their self-image, many pupils regard the low grade as irrelevant or meaningless. Others may blame themselves for the low grade but feel helpless to improve (Selby and Murphy 1992).

If the only instrument we have is a ruler, it would be at best an approximation to measure the volume of a bottle using it. What meaningful information would we get by adding the measures of length, weight and volume and by dividing these by three to get their summative average? Similarly, what would a summative average for English grammar, speaking and writing skills mean, all of these requiring a different set of skills. How would combining the averages of all these diverse skills in mathematics and English into one single measure yield any useful information, especially if the goal is learning? The 'hodgepodge grade' is hard to interpret and therefore limited in its potential to help a pupil improve (Brookhart and Nitko 2008; Cross and Frary 1996). Summative averages often de-motivate the majority who are not on the top rungs of a class. So many pupils give up very early thinking that they are just not good enough in relation to others in their class, and that in spite of their best efforts, they can never make it. They stop trying. Both the individual and society lose out.

The summative average, despite its potential usefulness to a policy maker, administrator or teacher, is more often meaningless for the individual pupil. It reduces a pupil to a number that is not only a poor estimation of his/her ability; it also potentially impedes growth and impacts negatively on a pupil's psychology. It is clear we must do away with the summative for the pupil, or use it judiciously as a measure of learning gain.

CWY: New Gauges of Success

Learning is a continuum along which every pupil moves, regardless of their relative position along the continuum. Every pupil has an innate capacity to grow and develop, even as each one progresses from one learning objective to the next. CWY helps speed up progress of all pupils, whatever their starting point. This is because the personalised CWY reports empower pupils with self-knowledge about their personal areas of strength and improvement.

Progress against oneself is the only true measure of success. Ultimately, a pupil cannot be pushed beyond her/his capacity, neither should another pupil be held back because others need to catch up. Every pupil in a class needs to be challenged and supported at her own level. The most important gauge of success, therefore, is whether every pupil in a class is making the best possible progress against their own potential. These new gauges of success give more importance to progress over performance.

The three most important set of questions to ask a pupil in the CWY system, therefore, relate to effort, quality and progress:

1. Is the pupil putting in his/her best effort? (Could you have done more?)
2. Can the pupil improve what she/he has done? (Could you have done this any better? How? In what ways?)
3. Is the pupil making progress? (What do you need to do next to progress beyond the present?)

Such questions lead to critical self-analysis such as how to improve on one's own past performance. They help pupils better articulate what they need to do next, and not to be satisfied too easily. If a pupil is able to articulate if she/he is progressing against his/her own past performance then, this is an important gauge of the effectiveness of CWY.

The next set of questions to ask a pupil in CWY relate to challenge, self-direction and self-regulation:

1. Is the pupil challenging herself/himself? (Do you self-study beyond the given assignments? How much? How often?)
2. Is the pupil able to set goals and direct his/her own learning? (Do you study according to the feedback provided? Do you set personal goals?)
3. Is the pupil able to exercise self-regulation? (Are you able to implement set goals and complete what you set out to do?).

Being able to set goals and self-regulate are necessary aspects of a pupil's self-assessment. CWY reports make it easier for pupils to answer the question: 'What next?' They help pupils better direct their own studies to those areas that need attention. They encourage pupils to set goals, put in greater effort and challenge themselves to do better than before.

CWY: A Beginning in Iceland

In 2001, Íslenskumenntasamtökin (ÍMS), a non-profit education society I founded, won the bid to run Iceland's first two charter schools in the city of Hafnarfjordur: Tjarnaras, a pre-school, and Áslandsskoli, a K-12 school (for ages 6–18). I asked the question: 'Is it possible to maximize the potential of every pupil in a whole classroom, or is this an oxymoron?'

To answer this question, Áslandsskoli provided the perfect setting for implementing several new approaches to teaching and learning, among them the pilot of the first CWY Assessment. In this, a pre-test was followed by all pupils receiving their personal CWY reports, followed by a progress assessment.

Both pre-test and progress assessments were criterion-referenced and scientifically similar. They were identical in the skills covered, the types of questions asked and the level of difficulty of the questions. I wanted to make these scientifically equivalent to be able to measure progress in the same exact skills, at different points in time, in the same academic year, on the same criterion, for the same individual. This was the beginning of assessments based on the principle of CWY.

After initial developments in Iceland in the period 2001–2004, CWY was implemented from 2005 to 2007 for 12,000 pupils of Grades 1-V at City Montessori School (CMS), Lucknow. This was followed in 2007–2009 for over 4,000 pupils at three other schools in India: Sharada Mandir School,

Goa, WH Smith Memorial, Varanasi, Sanskriti and the Gurukul, Guwahati. CWY was further replicated for some 1000 KS1 and KS2 pupils at six government schools in the UK in Greater London, Middlesex and Nottinghamshire in the session 2007–2008 in collaboration with the Innovations Unit of the Department for Education and Science.

Currently, there are some 40,000 students in 200 schools across 19 States of India and in Kathmandu, Nepal, who are using the CWY reports for all core subjects. A new pilot for KS2 and GCSE mathematics is also underway in the UK.

CWY Pupil Reports

Figure 11.1 has data from a pupil's CWY report from the first pilot in Iceland. Such a report provides much more information than a pupil is likely to get from a typical summative report which shows marks out of 10 or a 100. The CWY reports are also different from most diagnostic reports in subtle but important ways. A typical diagnostic report is a binary report. It tells what questions the individual pupil got right or wrong (with 1 or 0, ticks or crosses).

Most diagnostic assessments are norm-referenced and provide percentile scores, but CWY assessments and reports positively and consciously avoid the percentile and summative which compare a pupil with others. Regardless of whether this is useful information for the teacher and management, the overall score is not as relevant to the individual pupil, and clearly avoidable in a pupil's report.

A CWY report also acts as a personal work plan for the individual pupil following each assessment. The pupil in Fig. 11.1 had an average of 3.5 out of 10 in her baseline assessment taken in December 2003. A progress assessment of the same pupil and her class was taken in May, 2004. By May, this pupil's average performance in English had improved from 3.5 to 6.9 out of 10. Even with the higher average of 6.9 out of 10, this pupil was not amongst the top in her class in English.

The CWY reports are not binary; they present information in different bands according to confidence. The report shows areas of strength and improvement in at least three confidence bands:

1. Well done: Concepts or skills for which the pupil has a good understanding

WELL DONE: Maintain with Practice	
Picture Comprehension	10
Picture Comprehension	10
Word Meanings	8
Writing	8
NEARLY THERE: Consolidate	
Reading Comprehension 1	7.5
Spelling	7
Reading Comprehension 3	6.3
Reading Comprehension 4	5.7
Listening	5.4
Reading Comprehension 2	5
NOT YET: Start with simpler tasks first	
Speaking	4
AVERAGE	**6.9**

Progress in ENGLISH for the Pupil above	
Baseline Average in December, 2003:	3.5
Progress Average in May, 2004:	6.9
Progess points (6.9–3.5)	**3.4**

Fig. 11.1 CWY report for a pupil, grade 7, Aslandsskoli, Iceland

2. Nearly there: Concepts or skills for which the pupil has a moderate level of understanding
3. Not yet: Progress required

Besides a comparison of averages to indicate overall progress, progress was reported for each item in the table. When we first gave out the CWY reports that included summative grades, all attention went to the summative averages. When we removed the summative grade, we found that everyone's attention shifted to the details, and hence benefited the pupil more. By everyone we mean the three main stakeholders: the pupil, the parents and the teacher. Such detailed information about performance propels every pupil forward. The pupil sees in the CWY formulation of his/her own progress just waiting to happen, only if she/he puts in the effort. Greater intrinsic motivation begins to build, and a greater level of effort is observed.

Most pupils in the typical assessment regimes are not privy to such detailed information about their own performance, and therefore cannot clearly articulate their own areas of strength and improvement. Before handing out the personalised CWY reports, I have asked pupils in different classrooms to share on a piece of paper three to four concepts they think they are best in, and three to four concepts they find the most difficult in a subject. After handing them their personalised CWY reports for that subject, I have taken their feedback. Many pupils are surprised to find that their hunches about perceived areas of strengths and weaknesses have not matched their personal reports.

More recent versions of the CWY report (UK pilot in 2007 and 2016), Nepal (2013–2016) and India (2004–2016), are of a similar nature. These reports do not knowingly prejudice a pupil's view of his/her capacity by comparison with others. Instead, baseline data is used to help him/her move more efficiently towards the next set of goals that help him/her improve from the present level. The focus shifts away from comparison with others to competition with self.

Importance of Instant Corrective Feedback

Feedback is one of the most powerful influences on learning and achievement, but this impact can be either positive or negative. Effective feedback must provide feedback, and feed forward (Hattie and Timperley 2007). Grades with comments are better than grades

alone (Gersten et al. 1996). Teachers can teach and pupils can learn without grades. Checking and commenting is diagnostic. Grading is evaluative in which the teacher is a judge. A standards-based report card, with comments as below, breaks down each subject area into specific elements of learning to offer parents and educators a more thorough description of each pupil's progress toward proficiency (Page 1958).

A Excellent! Keep it up.
B Good work. Keep at it.
C Perhaps try to do still better?
D Let's bring this up.
F Let's raise this grade!

Stewart and White (1976) replicated Page's (1958) study and reviewed 12 other replication studies. They concluded that teacher comments, such as above, had little or no effect on pupil performance. Story and Sullivan (1986) found that while teacher comments had no significant effects on the continuing motivation of pupils, the combination of comments and an easier task were effective in motivating girls to return to the same task.

When feedback is combined with a correctional review, the feedback and instruction become intertwined until: "the process itself takes on the forms of new instruction, rather than informing the pupil solely about correctness" (Kulhavy 1977, p. 211). To take on this instructional purpose, feedback needs to provide information specifically relating to the task or process of learning that fills a gap between what is understood and what is aimed to be understood (Sadler 1989). Specific goals are more effective than general or nonspecific ones, primarily because they focus pupils' attention, and feedback can be more directed (Locke and Latham 1990).

The CWY reports are supplemented with personal work plans, such as the one below for mathematics, translated from Icelandic and it provides more specific comments, such as:

1. Practice multiplication tables: 4–9
2. Learn about halving of numbers
3. Practice breaking down images into 1/3rds
4. Simplify algebra characters that stand for a number

Characteristics of a CWY Report

There are at least three aspects of the CWY reports that make them distinct and different from summative assessment reports:

1. Reports are personalised for each pupil and presented in three-bands. In place of right and wrong by question, three bands (well done, nearly there and not yet) represent a pupil's confidence level in each skill. Different colours are used for the three bands. The reports are visual and easy to understand.
2. The stress is put on strengths. The report begins with 'well done'. Seeing the positive first has a different, more positive impact on a pupil's psychology. The reports serve the purpose of smart work plans for the individual pupil.
3. The reports focus attention on the detail. Reports purposely avoid giving summative averages and percentile scores. The focus invariably shifts to the detail.

It is clear that these reports act as a powerful medium of communication to the pupil that says:

> You are capable of progress, and here is the information you need to improve on your own previous baseline. It does not matter how others have done, where you have been, or are at in the present. It matters where you are going now.

Differentiation at the Level of the Table and Ability Grouping

There is overwhelming evidence that, in spite of all the hard work that goes into it, differentiated instruction at the level of the table does not work. Hattie's (2009) meta-analysis suggests that ability grouping has an insignificant effect. All differentiated instructional methods acknowledge the fact that pupils differ in their skill level not only across different subjects but also within a subject. A pupil may be good in mathematics and poor in language, or vice versa, but also weak within a subject in certain areas, for example, weak in geometry that requires spatial thinking, and strong in algebra that requires more analytical skills. A pupil's reality is

also dynamic and may change quickly. One minute a pupil does not know something, the next minute she/he does. Differences among pupils may also be due to lack in preparation, motivation, effort, a non-conducive home environment and other factors, not simply notions of ability based on marks. A teacher spends hours finding the right material for each table, but more importantly, thinking about ability limits growth. By seating pupils on different tables by ability in a subject can create fixed mindsets about capacity that can be potentially damaging. For these reasons not only should any comparisons of ability be discouraged, but also differentiation of teaching at a level of individual detail is needed.

Furthermore, according to a 2008 report by the Fordham Institute, 83 per cent of teachers in the US stated that differentiation was 'somewhat' or 'very' difficult to implement. Though there are a lot of arguments teachers give in favour, differentiation seems to be a promise unfulfilled, a boondoggle of massive proportions (Delisle 2015).

Perbooks: Differentiation at the Level of the Pupil

To support the process of differentiation of learning objectives within a class, Perbooks are used. We know it is better to improve per-pupil performance by differentiating at the level of pupil. However, when differentiating at the level of the table is so difficult, it is hard to imagine teachers differentiating learning materials for the individual pupil at the level of every concept. This is where CWY Perbooks come in.

The CWY Perbooks are short skill-based units, usually 16-page long worktexts that combine worksheet and theory, and that are easy to follow by a pupil at his/her level. The Perbooks are matched automatically by computer to every pupil's personal CWY diagnosis. The Perbooks fit individual needs at the level of detail, just like a glove to a hand. They provide the necessary support and challenge every pupil needs at his/her level.

Though selections are made online, the Perbooks themselves have been in the printed form only. Digital versions of the Perbooks are currently being beta tested for use on multiple digital platforms: tablets, iPads, computers and interactive whiteboards.

For the teacher, there is no longer hours of manual work to match study materials to individual table or pupil needs. Nor is it necessary to search for and duplicate stacks of worksheets. Ability groupings are also no longer needed, and pupils can sit anywhere they wish. While pupils work

on their personal selection of Perbooks, in printed or digital versions, the teacher becomes more effective facilitator of learning. Once an initial level of a Perbook is determined for an individual pupil, the rest of the selections are intuitive. The Perbooks are graded along a continuum from one level to the next in natural progression.

Goal Setting and Personal Work Plans

Goal-setting is built in as an integral component of the CWY method. After they receive their CWY reports, the pupils often set their own goals and add their own objectives to the personal work plans provided. This is powerful. Not only do the pupils get to read and understand their own needs and capabilities, they are also likely to work harder when the commitment comes from them. Pupils have an in-built desire to push boundaries, as we have seen again and again.

Additionally, pupils have been quite innovative in designing visual logs of their effort that are displayed on the soft-boards inside their classrooms, that they colour in upon completion of each Perbook assigned to them. Pupils also often write down the dates they began and completed a particular Perbook. One main advantage of the visual displays is the tracking of effort. The teacher can tell at a glance how many Perbooks have been completed each week by the pupils. The teacher can thus intervene early to ensure effort is being made by all pupils.

As there is no similar program we are familiar with, it would be hard to make comparisons, but below is compelling evidence for the success of CWY and results of confidential surveys from teachers and parents using this method.

Evidence that CWY Improves Learning and Motivation

I wanted to learn whether the CWY improves performance of all or just some pupils, and whether this in turn increases their motivation and effort. Can the impact of this on progress of individual pupils be measured objectively?

CWY Survey Results from Iceland

Going back to when we began work on this in Iceland, the progress made by pupils between baseline and progress assessments at Áslandsskoli was highly encouraging, but how would we know for sure that this impact was

not due to some other factors? We got opportunity to implement the CWY at another school nearby, Ingunnarskóla. This allowed us to create both experimental and control groups. Students in the experimental groups used the CWY reports. These were not given to pupils in the control group.

Figure 11.2 below is a Principal's Report in the form of a class-wise summary of results at Ingunnarskóla. The baseline assessment at this school was conducted in December 2003 and progress assessment in May, 2004. A total of 87 pupils in Grades four, five and six became the 'control group'. Looking at the progress out of 10 points, the average performance of the 140 pupils in the experimental group (remaining grades) improved significantly more than those in the control group.

Here is a comment from the eighth grade teacher at Ingunnarskóla:

> After attending the seminar on individualized mathematics . . . which was organized by ÍMS, I was quite convinced with the idea of CWY, the baseline assessment. I went back to my class and carried out last year´s Samræmdpróf (annual examination) on my 8th graders who did this same test a year ago. I was quite surprised to find that some pupils had not advanced at all in this one year. Now, I am proceeding with a more detailed analysis, as per CWY using Námsmatsstofnuns guide (how to evaluate and so on), to prepare individualized plans for my pupils. I find these ideas to be very helpful and useful for me as their teacher.

A School's Self-Analysis of CWY from India

In India, a 'control group' within the same school was created by Aggrasen Public School in Haryana. The school wanted to know if pupils using the CWY and study materials we provided that are similar to Perbooks in their school made greater progress than those who were admitted to their school in 2014 from other good schools of the city that were not using CWY methods. There were 135 pupils in the experimental group and 36 students in the control group. The school gave an unannounced test to both groups and the results of their study were provided to us as follows (Table 11.1):

The data are quite compelling in that the CWY group had more high performers and fewer low performers than the control group. The school has been implementing CWY till Grade V. They wanted to know how

Grade		Dec. Baseline corrected for Demo	May End of Year Survey	Progress out of 10 points
Grade 1	Average	5.50	8.83	3.32
	Median	5.63	9.20	3.57
Grade 2	Average	4.48	8.13	3.64
	Median	4.35	8.37	4.03
Grade 3	Average	4.06	6.87	2.81
	Median	3.80	6.75	2.95
Grade 4	Average	3.03	4.31	1.28
	Median	3.08	4.50	1.42
Grade 5	Average	4.18	6.25	2.07
	Median	3.90	6.17	2.27
Grade 6	Average	2.73	4.35	1.63
	Median	2.69	4.07	1.39
Grade 7	Average	4.63	8.01	3.38
	Median	4.32	8.42	4.10
Grade 8	Average	3.50	6.63	3.13
	Median	3.55	6.72	3.17
OVERALL	**Average**	**4.25**	**7.04**	**2.79**
	Median	**4.17**	**7.39**	**3.22**

Fig. 11.2 The CWY principal report, Ingunnarskóla, Iceland, 2004

Table 11.1 School's self-analysis of CWY, Aggrasen Public School, Haryana, 2014

	CWY (% of pupils with marks above 60 %)	*Control Group (% of pupils with marks above 60 %)*	*CWY (% of pupils with marks below 40 %)*	*Control Group (% of pupils with marks below 40 %)*
Grade IV	77.0	19.0	1.6	28.6
Grade V	62.4	11.8	7.8	41.2
Grade VI	46.4	9.0	14.8	28.0

their pupils would survive a traditional system in Grade VI after having completed two years in the CWY and it seems that although the difference between control and CWY groups is less marked at Grade VI, the benefits have continued.

Teacher and Parent Views of Perbooks (India)

A confidential survey of 236 teachers of Primary Grades I–V at City Montessori School in Lucknow, India, is summarised below:

- 92 % of all the teachers felt that the pupils have liked the Perbooks and think they are excellent or very good.
- 87 % of all the teachers felt that the parents have liked the Perbooks and think they are excellent or very good.

Comments made frequently by the teachers included the following:

The CWY Perbooks have worked out very well. The pupils come up with their problems and we work together.
The approach towards Perbooks encourages self-study. So, this has gained popularity.
They enjoy the Perbooks as they are easier to understand and doing the Perbooks is not a burden for the pupils.
The Perbooks are creating self-confidence in the pupils giving them the knowledge of the subject more clearly.

Similarly, in a confidential survey of some 12,000 parents after 1 year of implementation of the CWY at CMS, Lucknow, the parents reported that

they liked the Perbooks (95 %) followed by CWY reports (92 %). The parents reported that Perbooks were good for:

- self-study (92 %)
- parents' greater ability to help their children (89 %)
- goal-setting (86 %).

Perbooks and Motivation, Effort and Progress

Impact of summative assessment on students' motivation for learning can be both direct and indirect. A direct impact can be through inducing test anxiety and the effect of low scores on self-esteem and perceptions of themselves as learners; an indirect impact can be through the effect on their teachers and the curriculum. Any negative impact on motivation for learning is clearly highly undesirable, particularly at a time when the importance of learning to learn and lifelong learning is widely embraced. Thus it has been argued that testing may be accompanied by unintended negative outcomes which have serious consequences for current generations of students (Harlen and Crick 2002).

Meanwhile, intrinsic motivation concerns the performance of activities for their own sake, in which pleasure is inherent in the activity itself (Deci 1975; Eccles et al. 1998). Working in the Perbooks becomes a satisfying activity. Intrinsic motivation is one of the main outcomes of CWY.

Data shows pupils that complete more Perbooks make greater progress. When pupils witness the impact of their own effort on progress, this motivates them to do more. The more effort a pupil puts in, the more progress she/he is likely to make, and the more progress she/he makes, the more motivated she/he is likely to feel. Effort becomes a proxy for progress. Progress against one's personal baseline builds intrinsic motivation and creates an inner desire to excel.

Challenges of CWY and How to Address Them

A teacher saves time when Perbooks are used in place of differentiated study materials. However, the quantum of effort by the pupils increases tremendously. This can create a counter problem. Teachers can get overwhelmed by the quantity of work coming in for correction.

Teachers have nevertheless been able to find creative ways to deal with this. For example, instead of the usual homework, they assign Perbooks as

personalised homework. Teachers save time by using self- and peer-checking methods to correct Perbooks in the class itself. This has other benefits: instant feedback followed by immediate corrective action has one of the highest effects according to the meta-analysis of education research by Hattie (2009). Despite all the hard work teachers do in correcting work outside of the class, feedback within the class is far more effective.

Self-diagnostic reports are provided along with assessment booklets in the recent paper and pencil version of the CWY assessments. These reports are hand-filled by the pupils themselves. Therefore, neither teacher correction nor data entry is required. Pupils peer-check each other's work and enter the scores. The purpose of assessment shifts from the collection of marks to understanding needs and learning from the assessments. When pupils feel safe that they are not being judged by the marks, they enjoy the learning involved in the correction process and do not cheat. The alternative is for teachers who prefer to check the assessments themselves to enter marks to generate all the necessary reports and work plans.

Using Technology to Deal with Teacher Workload

Perbooks can also be online and interactive. When assessments are conducted online, there is no need to enter data. The reports and Perbook allocations are automatically made by the computer to match individual diagnosis. The use of tablets and mobile technology further accelerate learning and reduce teacher workload. Armed with the reports that provide information for each pupil and the class at their fingertips, the teachers are better able to track per-pupil progress, and better differentiate for their individual needs, without dividing the class into groups. Overall, teachers save time, and become more effective in the goal of ensuring the maximum progress of the individual pupil and the class as a whole.

Further Developments in the Use of Ipsative Assessment

Progress can be a vague term when we consider how it has been used at times, for example in the UK, assessments and reports using 'levels' have been used for over a decade and a half. Yet, in 2014 it was realised that levels were holding back individual potential and in-depth learning. Now assessments without levels are being mandated from 2016. In this case the onus of carrying out the assessments has shifted to the teacher, they are free to innovate and CWY is a possibility.

Making Case for CWY

We can all agree that the overriding principle of a good assessment is that it is clearly tied to its intended purpose. If progress of every pupil is the intended purpose as in ipsative assessment, then we need to go back to the drawing board and think a lot more radically about assessment.

Good formative assessment ranges from the probing questions, quick recap at the opening of a lesson, scrutiny of pupils' work, right through to formal tests with the explicit purpose of getting feedback that can be used to improve learning outcome. At all stages, assessment needs to be about the individual pupil, how to motivate him/her to make progress at each step, and how to support him/her in this process. Anything that distracts from this objective is unnecessary for the pupil.

As mentioned in Chap. 1 of this book, ipsative assessment is assessment for learning and is therefore formative, but also can be an assessment of learning requiring a measurement or judgement of learning gain at the end of a period of study (Hughes 2014). CWY is first and foremost a formative assessment used to modify instruction and guide the use of different interventions with the explicit purpose of improving a class' performance. It makes early intervention possible. It is also a tool for capturing real time data, checking on-going effort by a pupil and for measuring progress of every pupil, class and school.

The per-pupil data collected each time an assessment is taken, especially when standardised national tests are conducted as part of the CWY, have the potential to provide real time valuable information to the policy-maker at different levels: school, local, regional and national. With the support of technology, it is possible to get massive amounts of useful information without the need for separate summative assessments that governments use to hold schools accountable.

Teacher Incentives

If progress is the main objective, teachers need to get incentives for maximising the progress of their pupils. While there are proxies for performance-related benefits in the corporate sector, there are not many equivalents of this in education. Lack of incentives is due in part to lack of objective information and satisfactory measures of a teacher's success. CWY may be used to incentivise teachers based on the progress their

pupils make. In the future, teachers may be held accountable for one goal only—the progress of their pupils. A focus on progress is also likely to motivate the teacher to become more meaningfully engaged and more intrinsically motivated.

Summary and Conclusions

Education's role is to ensure that all pupils maximise their personal potential. Overall comparisons of ability can be damaging to most pupils. A pupil who feels 'I am not good enough, I will never succeed, others are so much better than me' is less likely to progress than a pupil who feels his/her efforts will make a difference. Poor performance in the past does not have to mean poor performance in the future. All relative distinctions, norm-referenced percentile scores and summative averages, though useful to the policy maker, need to be banished from reports for the individual pupil, except to report on any learning gains. Age, cohort and grade comparisons can be viewed as a double-check on a pupil's accomplishment but do not necessarily lead a pupil towards greater effort which is a prerequisite for progress.

Ipsative assessment, or improvement against one's own past performance, is, however, a reliable predictor of progress, not age and grade level performance or relative comparisons. When progress against self is considered important, 'A' is for effort and for doing one's very best, not for topping in a class, or for getting high marks. Measuring the difference in performance between pre-test and progress assessments provides useful and valuable information by which a teacher can gauge the success of his/her pupils and of his/her own efforts. The same data, presented in the summative format can be used by principals and policy makers to make policy level interventions at the school, local, regional and national levels, providing measures are scientifically equivalent, or the same.

The main purpose of the CWY is to help individual pupils develop greater confidence and build skill, while reinforcing the importance of effort and improvement and comparison with self. The CWY puts a pupil's assessment in the dynamic cycle of competition with oneself that, data indicates, improves performance and maximises progress.

There are many factors that contribute to such learning gain. The CWY not only empowers every pupil with self-knowledge about their personal areas of strength and improvement, it also provides them strategies,

personal work plans and individual support through personalised study materials called Perbooks. With personalised support at the level of the pupil, CWY improves the possibility of every pupil progressing more than when relative comparisons are made. It is far more important to know that every pupil is putting in the effort and therefore progressing than to know whether the pupil is succeeding in relation to others in the age group.

Even though the proposition of replacing conventional tests with ipsative assessment is rather radical at this stage, such a transition needs to be seriously considered if we are to make quantum leaps in the progress and self-esteem of all pupils. The evidence already shared in this chapter and the book is proof enough, and there is a growing body of research in its support. The costs of implementing ipsative methods are also likely to be far less than the opportunity costs of wasted human potential in a prevailing age-based regime of the summative that reduces pupil potential to a mark out of 10 or a 100.

When countries can be held hostage for decades to reforms that do not make sense as acknowledged now in the UK in the abandonment of levels, it is definitely worth trying out the ipsative approach, with all the indicators of its potential for impact on learning gain. At a minimum, it may be worth a bigger trial and a much larger scale implementation with a third-party evaluation built-in, to provide further evidence of its efficacy to those as yet sceptical about its potential. Given that schools have more autonomy now, such an implementation is more likely in the next few years, paving the way for the large scale adoption of ipsative assessment. I believe these changes are entirely within the realm of possibility.

Acknowledgements I would like to most humbly thank all those who have helped me move along my own continuum of learning about CWY starting with Bodvar Jonsson, Steinunn Gudnadottir, Hanna Ragnarsdottir, and other members of the Islensku menntasamtokin, IMS, Iceland. Many amazing people have helped shape my thinking. These include Bob Saunders, Co-Founder, Council for Global Education, USA, Bob Baratta-Lorton, Center for Innovation in Education, USA, Fred Mednick, Teachers Without Borders, USA, Deryn Harvey, former Director, Innovations Unit, DfES, UK, Helena Thuneberg and Mari Pauliina Vainikainen, University of Helsinki, Finland, Pirjo Koivula and Irmeli Halinen from the Finnish National Board of Education. I want to especially thank Gwyneth Hughes for all our interactions following a long Skype session some 2 years ago.

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G. Hughes (ed.), *Ipsative Assessment and Personal Learning Gain*,
DOI 10.1057/978-1-137-56502-0