

First impressions of education specialists

LbQ has received almost universal positive comments all round. As teachers become familiar with the system we see increased usage. Senior Leadership are also very impressed including one Headteacher who described LbQ as 'seeing the learning happen'.

"Unlike other packages that claim to provide rapid feedback to students, Learning by Questions empowers teachers to do just this through a personalised process. The software is designed to alert teachers to misconceptions and difficulties as the students face them, allowing for very early intervention to be delivered.

The progression within sets of questions has been thought through very carefully, as have the ease with which teachers can prepare and assess sessions. LbQ is a powerful tool which could effectively complement classroom teaching and really enhance the students' learning experience."

Lakshmi Hewavisenti, Senior Secondary Mathematics Consultant, Hackney Learning Trust.

Not all schools have the appropriate tablets and teachers have expressed some frustration on this point. We have also noticed that teachers do not have a 10" or larger tablet to see the results matrix and be mobile with it in their classroom. Suitable tablets of this specification can cost under £150 and not having one limits the interventions that teachers can make. Sometimes the pupil tablets are not good enough. Anything under £60 can be a compromise too far. Some school Wi-Fi systems can also pose limitations though LbQ has employed a network specialist to support these schools. The programme, including tablets, typically costs 1 – 1.5% of classroom budgets.

Learning by Questions

www.lbq.org

info@lbq.org

+44 (0)1254 688060

Learning by Questions has been created by the founder of Promethean and it is owned and financed through his family charity, the Bowland Charitable Trust.

Background to the School Feedback Project

Following BETT 2017 we recruited 50 schools primary and secondary for a 1 year project using LbQ. Schools were divided into 7 geographical clusters covering more than 10 local authorities: Belfast, Lancashire (2), Wirral and London (Hackney, Newham and Waltham Forest). Each school was asked to provide two teachers for the project and allow teachers to attend an initial one day training session followed by two cluster meetings during the project with a third cluster meeting at the end.

Teachers were required to run 3 question sets each week and report on their experience from 50 of these during the year. The Institute for Effective Education in York participated by monitoring the teacher feedback. When each school had provided 100 reports the school would be presented with an interactive panel as a mark of LbQ's thanks. Schools would also be paid for supply cover teachers. Teachers were also presented with a £25 Amazon token for attendance at the cluster meetings.

Additionally schools would be provided with free access to the LbQ questions sets for 3 years for all teachers in the school. These arrangements were made as we appreciate that schools are under great financial pressure and

teachers under extraordinary time pressure which prevents the introduction of new ideas however good they might be. Schools were asked to provide tablets to the classes involved and they agreed to do so.

Mostly the schools began to use LbQ at the beginning of October. The project was for Maths mastery years 5, 6, 7 and 8 and initially was held back as the questions sets covering the relevant curriculum were not complete (they now are). We now have over 200 sets with about 6,000 questions and diagrams where appropriate, all with feedback and all graded from basic to mastery. We will be providing four, 200 page books that provide teachers with a clear view of the up-to-date curriculum and what they need to cover during teaching. We are proceeding now to create maths mastery question sets for years 3, 4 and 9 and question sets covering English and Science over the years 3 to 9.

Out of the 96 teachers participating in the first period of three months, 90 submitted more reports than required. As teachers get familiar with the programme we have seen an exponential trend with more reports coming in

every week. Usage is also extending outside of the project. We anticipate that we will reach the target of 5,000 teacher lesson feedback reports with a good mixture of primary and secondary. The cluster meetings have worked well. Prolific users are encouraging moderate ones, a regular newsletter keeps everyone involved updated and the feedback is instrumental in developing LbQ as a programme to evolve teaching and learning.

"It has changed my teaching. Life is made simpler."

**Merline Worgess,
Gainsborough Road Primary,
Newham**

"Thank you. This has revolutionised our classroom!"

**Corinne Drysdale,
Assistant Headteacher,
Rock Ferry Primary, Wirral**

Learning by Questions - an evolved pedagogy

School Feedback Project – Interim Report
(first 3 of 9 months) January 2018

See LbQ in a real classroom at www.lbq.org

Learning by Questions (LbQ) is an online teaching and learning programme that is the culmination of over a decade of experience in improving education.

Due to market in September 2018, the programme is currently being trialled by 100 teachers in primary and secondary schools across the UK.

BETT Award Finalist
Innovator of the Year 2018
BETT Award Finalist
Start-up of the Year 2018

KEY AIMS	<ul style="list-style-type: none"> Over 200 adaptable question sets are currently being used in classrooms across the UK. A further 500 question sets and thousands of individual questions covering maths mastery, science and English will be available by September 2018. 98% of teachers report that the quality of the content is good to excellent, describing questions sets as "masterpieces" and "the best lesson" on that subject they have ever taught. 100% of teachers describe the pedagogy as 'easy' or 'very easy indeed' to use.
ONLINE MASTERY CONTENT WITH SCAFFOLDED QUESTION SETS	
REAL-TIME ANALYSIS, GUIDING INTERVENTION AND CONTINUAL FORMATIVE ASSESSMENT WITH FEEDBACK	<ul style="list-style-type: none"> Teachers are using results in real-time to help with intervention during the lesson. "The results grid gives me a better snapshot of class position than marking all the books ever could." Immediate feedback for pupils is cited by most teachers as one of their top three favourite features of the pedagogy.
DIFFERENTIATION WITHIN MIXED ABILITY GROUPS AND PUPIL ENGAGEMENT	<ul style="list-style-type: none"> Teachers can adapt and run up to three question sets simultaneously. "Pupils like this miles better" is a typical response in surveys. Multiple anecdotal examples of increased pupil engagement have been recorded, peppered with phrases such as "boosted confidence" "really turned a corner" and "kids were 100% focused". Many teachers have re-examined their previously held assumption of a pupil's ability based on surprising question set results.
REDUCE TEACHER WORKLOADS	<ul style="list-style-type: none"> Of the 'Teacher Lesson Reports' submitted over the first three months, the vast majority declared that it had saved them marking time. At this early stage 28% reported 0-15 minutes, 35% reported 15-30 minutes and 14% reported 30 minutes plus saved for each question set. Lesson preparation has been made more efficient by 15 to 30 minutes for the majority of teachers, with instantly accessible resources to cover "identified gaps in learning". Newly qualified teachers who are building content from scratch particularly benefit.

Summary

Whilst many schools have invested in classroom technology, often they do not have a clear strategy of use to improve learning outcomes and teaching effectiveness and efficiency. By providing differentiated question sets to students with immediate feedback and real-time analysis without the burden of marking for teachers, early indications show that Learning by Questions could be that strategy.

One of the feedback project teachers described it as **"revolutionary"**.

Online mastery content and scaffolded question sets

The decision to categorise our questions into Understanding, Fluency, Reasoning and Problem Solving was correct. However, we have learned that the full range can be too wide for some pupils. Even the more proficient of learners can spend too much time ploughing through all four categories, inadvertently reducing the opportunity to teach more. This was not our intention.

As a result, our 'adaptation feature' has become important in helping teachers regulate levels of challenge for their particular group(s) of pupils. By splitting question sets, several teachers are concurrently running 2 or 3 activities at the same time for this purpose.

We have had some requests for questions at lower levels of challenge and to split the purpose e.g. instead of 'add and subtract whole numbers' we also have question sets for 'addition' and 'subtraction' alone. Other teachers have requested more 'recall' sets like multiplication exercises and number bonds and we have added these.

As a result, teachers are extending their use of question sets beyond the classroom, before the lesson and even the evening.

"Setting it up has been simple and we've been running 3 question sets at the same time which is great for differentiation, doing 3X, 6X and 7X tables. It's fantastic to see the higher ability students flying, having a go at those deeper mastery level questions and the proof of what they're capable of is all saved. It's also great for filling gaps in kids learning, identifying where the weakness is."

Laurence Thomas,
Rock Ferry Primary School, Wirral

See full unedited teacher feedback on this topic at www.lbq.org/teacherviews

Real-time analysis tools

One of the key features of LbQ for teachers is the 'results matrix'. This screen is updated every few seconds and gives the teacher an accurate picture of the performance of their class and everyone in it.

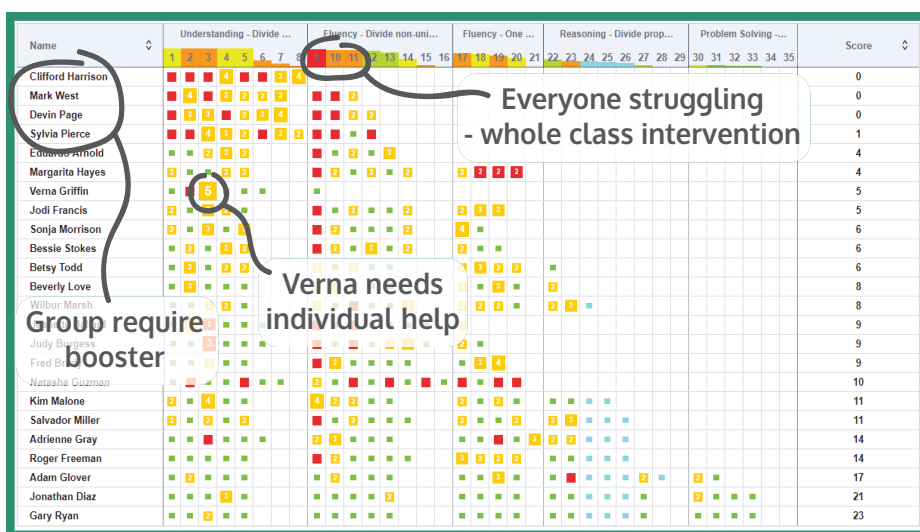


Figure 1: Results Matrix showing interventions

As we follow the teachers' usage remotely, we can see that they are using the matrix to assist the timing and placement of their interventions. But they are also discovering gaps in learning, under-the-radar high achievers, class misconceptions etc.

"It actually made me smile to discover that my students didn't understand the difference in phrasing between 'divided by' and 'divided between'. I honestly don't think I would have ever spotted that if it wasn't for LbQ."

Emma Tranter, Maths Leader,
Ribblesdale High,
Clitheroe

"The results matrix gives me a better snap shot of class position than marking all the books ever could!"

Rachel Doherty,
Bowland High,
Lancashire

"A child who doesn't always contribute showed much better understanding than I thought she had."

Fiona Heppenstall, Deputy Headteacher,
Barnacre Road Primary,
Lancashire

Differentiation and pupil engagement

Teachers report that students very much enjoy the experience of LbQ and some have even introduced a break club so that keen pupils can do even more. This enthusiasm has not diminished over time.

Often the teachers show the results matrix to the class on the whiteboard. Perceived wisdom suggests that this might discourage some students but this does not appear to be the case. Students compete with themselves, enjoy doing better 'as a class' and like the ability to re-answer the questions. Teachers sometimes encourage the students finding questions challenging to go and seek help from those who are doing well. The point is that teachers can make informed choices about how to best motivate and organise their classroom.

One issue that has arisen is the need to train and encourage pupils to read the feedback. However, LbQ makes it obvious to teachers where pupils are ignoring the feedback or require intervention.

"I love this new app a lot! This has made me improve so much that I want to play more. My teacher (Miss Smith) can see how I'm doing and the best part is that I can do my working out!"

T, aged 10,
Godwin Junior School, Newham

"The kids were 100% focused. Not one of them was ever off task. They really do like this software. The questions motivated the more challenging/ lazy pupils. In contrast, when I taught these kids using a text book, the lazy ones simply were not motivated and did little work!"

Duncan Whittaker,
Bowland High School, Clitheroe

"Dear LbQ team,
I really like LbQ because it helps people learn in an exciting fun way. Everyday we get a new quiz and it makes our brain think a lot however the working out icon is very hard to do working out on because it makes doodles and scribbles random. Also please make more because Ms Smith doesn't have to do any marking which takes away a lot of stress."

I, aged 10,
Godwin Junior School, Newham

See full unedited teacher feedback on this topic at www.lbq.org/teacherdiscovery

Reducing teacher workloads

80% of all the teachers confirmed that LbQ has saved them marking AND planning time with the overwhelming majority claiming back more than 15 minutes or even 30 minutes plus per lesson for each task.

"I just love not having any marking, yet always having a full set of results to analyse straight away."

Kirsty Finn,
Irby Primary, Wirral

"Saving marking time means I can effectively plan the next lesson."

Claire Marciniak,
Tyssen Primary, Hackney

"Teachers can concentrate on TEACHING instead of moving around the classroom with a green pen!"

Andy Done, Assistant Head of School,
Masefield Primary, Bolton

"Even for smaller class groups, marking would have taken up a chunk of my evening."

Fiona Heppenstall, Deputy Head Teacher,
Barnacre Road Primary, Lancashire

100% of teachers have confirmed that LbQ is easy to use. Students using the App connect within seconds to the first question and the teachers can be trained in the basics within an hour. The class results are available to view at a convenient time for the teacher.

See full unedited teacher feedback on this topic at www.lbq.org/teachertime