#### **Improving the Academic Chances of ‘Repeat’ Students**

This is a more detailed discussion of the Action Research Example 2 in Chapter 8 of the book by Opie and Brown (2019).

As part of her mathematics timetable Lily Soh (2000) had been given the job of teaching a group of students, who, having failed various exams first time round, had been labelled as ‘repeat students’. The term ‘repeat students’ carried with it various negative connotations which, whether true or not, were perceived by various other teaching colleagues to have some credence. The perception was that they were lazy, academically weak, problematic, awkward and troublesome. Lily believed the ‘labelling’ attached to these students was exacerbating their position. She therefore decided to undertake a piece of action research to firstly ascertain the causes for why these students had ended up having to repeat their studies in mathematics and secondly, to act upon these findings, for example by modifying her teaching. Her final goal was to evaluate the impact of any changes she implemented with a view to further action if necessary.

By interviewing her set of ‘repeat’ students, using a semi-structured interview procedure, she found that in their view the main factors for them not doing well in Mathematics to date were:

1. *the module was too difficult*
2. *there was too much material to learn*
3. *they had made insufficient personal effort*
4. *the lecturer was boring, unfriendly and impatient*
5. *the lecturer taught at a very fast pace*
6. *they were not motivated*
7. *no one helped them when faced with problems*

(Soh, 2000: 74)

Soh interpreted these results as indicating that:

[…] the students attributed their failure mainly to external factors [see (i), (ii), (iv), (v) & (vii)] and one controllable factor [(iii)]. The student or the teacher can influence almost all of these factors. For instance, students can increase the amount of effort to be expended since they find that they did not work hard enough in the last semester. On my part, I can help them to overcome factors (i) and (ii) by breaking the materials into smaller chunks before presenting to them. In addition, I have control over the delivery pace [factor (v)] and my rapport [factor (iv)] with my students. (2000: 76)

On probing further, she found that it appeared that many of their difficulties stemmed from their lectures and that they found lecturing an ineffective teaching method. Interestingly these same students initially faced similar motivational problems with some of their engineering modules, but then the laboratory lessons and hands-on experiments which supplemented them helped them to understand those materials that they could not grasp during the lectures. As a result, Soh decided she would:

[…] conduct my lessons in small tutorial groups and do away with lectures. When I announced my intentions, the students expressed much enthusiasm in the new arrangement. (2000: 83)

To improve their understanding of Mathematics the students also suggested that Soh ‘informed them why they were learning the subjects they were’, ‘used examples to illustrate concepts’, ‘explained solutions clearly step-by-step’, and ‘summarised what should have been learnt’. A few students also proposed that the she ‘allow students to work on assignments together’ and ‘provide a way for feedback when they encountered problems’. Interestingly, although the students still ‘favoured the conventional method of teaching, whereby their teachers “passes” knowledge to them’ this ‘passive learning’ was something Soh initially wanted to change, but, being determined not to impose her own style, took all of the points above on board.

In looking to meet her student’s requests her intervention involved providing a simple summary sheet to enable students to build up concepts step-by-step and thereby hopefully helping to support their understanding of new material. She called this summary sheet an ‘advanced organiser,’ borrowing this term from Ausubel (1963) and his belief that a person can learn new material more meaningfully when the new material can be subsumed under their existing concepts.

A ‘How am I doing’ diary for student’s use was introduced so they could express their thoughts, in writing, about how they saw themselves progressing and which she could use to identify students facing difficulties so that she could more aptly focus her support.Finally, Soh planned for students to work in groups when carrying out tutorial assignments with the aim of developing more interaction and collaboration in class and in so doing address the ‘passive’ approach to learning.

As this point Soh had completed the first part of her action research and moved into the second part, implementing the changes she had decided upon. She implemented her changes over a fourteen-week period and, as all good action researchers should be, she was systematic in her approach to the collection of details and analysis of the impact her changes that her work produced.

Soh had no choice about when her lessons should run. The times allocated (3 pm–5 pm on a Wednesday afternoon, when other students were undertaking extracurricular activities e.g. sports, and 9 am–11 am on a Saturday), would not strike many as the most conducive to achieving successful outcomes. However, her personal drive and enthusiasm to do the best for her students and to stick with the findings from her initial data collection paid dividends. She noted that during lessons:

[…] the students asked me more questions to clarify their doubts and when I posed questions, they were always eager to volunteer their answers.

When given questions to solve in class, I noticed that they would concentrate and stay with a single task, paying attention to details until it was completed. (Soh, 2000: 93)

Even more positive in her eyes was the fact that:

 […] when they got back their marked homework, instead of comparing grades, they were more interested in exploring their mistakes and making amendments. I interpreted this as showing that the students’ focus has shifted from getting the right answer to learning HOW to get the right answer.

In addition, Soh noted her students attended classes more punctually, completed their homework promptly and produced good quality work. She was also of the opinion that feedback, which was concise, accurate and informative had also played a part in this success and constantly reminded herself to ensure this continued.

A positive response to the use of an ‘advance organiser’ also materialised. It was common to hear students mention things like ‘I can’t remember, let me look at the advance organiser’ or ‘let’s refer to the advance organiser before we proceed further’. Interestingly some students found her format of ‘advance organiser’ very dull and one created his own format which ended up resembling a mind map. Although he felt it was ‘messy’ Soh suggested that he shared it with the class. He willingly agreed to do so and this sparked off further exciting activity that the students appeared to enjoy.

The ‘How am I doing?’ diary was much less well received. After a few weeks, many students, for variety of reasons e.g. ‘it is a waste of time; it’s faster if I tell you my problems’ and ‘not an effective way of tracking my progress’ requested to stop writing the diary. Considering it was not achieving its aim and not wanting to pressurise her students into doing something they disliked, she decided to give them the freedom as to whether they want to continue with it or not. Eventually, all students chose not to write the diary. Here we see Soh being open to change as her work progressed, which is another important consideration of action research.

Another positive development was the willingness and desire of students to work in pairs to solve problems and to construct their own, for other pairs to solve. You may work in an educational culture where such activity is commonplace, but Soh did not and the fact that her students showed this increased ‘independence’ in their work was a proud moment for her. She also felt that constructing their own problems helped students in their understanding of concepts and further, she observed that:

Sometimes, conflicts arose but somehow they reached a consensus, either by compromise or by trying the different approaches one at a time. Watching them argue over conflicting ideas and resolving them allowed me to observe the changes in their train of thoughts. It reminded me that my students were able to solve their own problems and could make their own choices and decisions.

Space does not permit a full discussion of Soh’s action research but her key reflections on it are reproduced here, as they are, in my view, indicative of the potential of this approach in bringing about real and positive change.

When I was assigned to teach this group of repeating students, my initial feelings were one of misfortunate. I have heard often enough from other lecturers on their lack of motivation, low abilities and bad attitude of towards learning*.*

*However, as I came to read* th*e literature for my research I realised that:*

I had to … assume they all had the potential and ability to learn Mathematics. I initiated some “brain washing” for myself by practising “mental rehearsal”. I repeatedly told myself that I should not be prejudice against these students and I needed to change my mindset if I wanted them to learn successfully.

*This led me to:*

‘… place a lot of emphasis on making learning a process rather than a product. I also encouraged them (the students) to focus on making good effort, being responsible and to ask for help whenever necessary. In addition. I chose to give comments and feedback based on their understanding of the materials and level of effort … and to feedback in writing or speak to the student individually to identity their cause of difficulty.’

*As a result, I think the students knew that I was giving them an equal chance to learn by not stereotyping them and they responded by putting in more effort in to their work. In the process:*

I learned not to underestimate the students’ capabilities. There were times where their suggestions were better. If I had been very rigid and not allowing changes in my class, I would not have come to observe the different ways students learn, understand and could work together (for example) to formulate quiz problems. It was really inspiring to see them being so highly motivated in the class. However, to achieve this kind of excellence requires special understanding and extra time and effort. (Soh, 2000: 114)

In conclusion, Soh saw her action research as providing one of the most valuable rewards for her in her teaching career. She realised that up until carrying it out, she was so concerned about completing the syllabus and maintaining the students’ performance that she overlooked a key element for learning, motivation. Her research helped her to see teaching was more than helping her students obtain good grades, but that it played a critical role in helping to develop them as responsible, independent and self-motivated individuals.

**References**

Ausubel, D.P. (1963) *The Psychology of Meaningful Verbal Learning*. New York: Grune and Stratton.

Opie, C. and Brown, D. (eds) (2019) *Getting Started in Your Educational Research: A Student’s Guide to Design, Data Production and Analysis*. London: Sage.

Soh, L. (2000) ‘A classroom case study on ways to create a motivating learning environment’. MEd thesis, University of Sheffield.