Flexible Grouping Practices

Conceptual Understanding in Numeracy

Professional Learning Pack

This pack consists of a mixture of papers and videos discussing the impact of ability grouping and setting on pupil achievement. They take into account the work undertaken by Carol Dweck on mindsets and the work carried out by John Hattie on effect size of interventions. The pack offers alternative suggestions to classroom organisation and management of groupings and considers the impact of expectations of pupils.

VIDEO 1

Maths Ability Grouping: Setting Ability Groups (Youtube video), Jo Boaler

Weblink: https://www.youtube.com/watch?v=R4iAwShVIBE

This video hears Jo Boaler discuss current research into the effects of ability grouping as opposed to mixed achievement sets. She also considers how ability grouping can affect mindsets of learners and reveals the outcomes of several research projects in these areas, including statistics.

Reflective Questions

1. Jo Boaler posed the following question at a teacher's conference, "How do students receive fixed mindset messages in schools?" What are your thoughts?
2. In your experience reflect on the statistic that "88% of students put into groups at ages 4 and 5 stay in those groups for the rest of their school career" To what extent do you agree/disagree?
3. Why do you think ability grouping studies showed no advantages and significant disadvantages for learners?
4. Summarise the key messages from the Video.

VIDEO 2

Ability Grouping, Tracking and Grouping Alternatives (2010), Oakes, J., Slavin, R. and O'Flahaven, J.

Weblink: https://www.youtube.com/watch?v=tItvMjRxL_c

The three authors share their insight to ability grouping during this five minute video. They discuss the complex practice of grouping by achievement as a way of differentiating and the lack of evidence that this theory is effective. The authors suggest alternative practices for classroom teachers and their implications.

Reflective Questions

Why do you think grouping by achievement is so complex and imprecise?

1. What reasons do the authors give for the prevalence of grouping by ability?
2. To what extent do you agree with the statement that 'Heterogeneous grouping is a misnomer…'.
3. What are the implications for flexible grouping?
4. What social benefits can there be when flexible groupings are used?
5. Summarise the key messages from the video.

READING 1

Calling a spade a spade: The impact of withinclass ability grouping on opportunity to learn mathematics in the primary school, Doug Clarke (2021)

Weblink: https://arc.educationapps.vic.gov.au/1674.efm

This article focuses on the unintended consequences of within-class ability grouping on primary students of mathematics. I review relevant research, including promising approaches to teaching in mixed ability settings. I then outline four ways in which these groupings are typically structured, discussing some of the issues that arise with each of these structures. The article has an overarching focus on maximising the opportunity to learn of all students.

Reflective Questions

1. To what extent do you agree that teachers of lower ability learners have lower expectations of their learners' capabilities?
2. What might be the challenges that face a class teacher in a mixed ability class?
3. What are the benefits of having a mixed ability maths class?
4. Summarise the key messages from the text.

READING 2

Ability and Mathematics: the mindset revolution that is reshaping education (2013), Jo Boaler

Weblink: http://www.youcubed.org/wp-content/uploads/14_Boaler_FORUM_55_1_web.pdf

This paper reflects heavily on the research work of Carol Dweck and the influence mindset has in relation to ability and achievement. It particularly focusses on Jo Boaler's work with mindset in mathematics. It considers the impact of the use of ability grouping on learners and also discusses the use of mistakes as deeper learning opportunities.

Reflective Questions

1. To what extent do you agree with the statement that the subject area that creates the strongest fixed ability messages and thinking is mathematics?
2. Consider the way numeracy is taught within your establishment/class. Are learners grouped by ability from a very early stage? What opportunities are there for learners to move between groups?
3. Carol Dweck was discussed in the paper with regards to fixed mindset praise. Reflect on the types of praise you give to learners. To what extent does it suggest this?
4. Reflect on your current classroom practice. How often do you use pupil mistakes as opportunities for deeper learning experiences?
5. Summarise the key messages from the text.

READING 3

Teacher Actions to Maximize Mathematics Learning Opportunities in Heterogeneous Classrooms (2006),

Peter Sullivan, Judith Mousley and Robyn Zevenbergen

Weblink: Access through EBSCO – see 'Accessing Papers' section above

This reading explores methods of ensuring differentiation and challenge within mixed ability classes. It suggests that the planning and predicting stages are critical and offers a way of ensuring that pupils are extended and supported whilst sharing a communal goal within the class.

Reflective Questions

1. How do Sullivan et al suggest teachers provide differentiation?
2. What benefits do the authors see to whole class teaching?
3. What challenges might there be with this approach?
4. To what extent do you agree with taking a whole class approach to teaching numeracy and mathematics?
5. Summarise the key messages from the text.

READING 4

Enacting High Expectations For All Students (2014), Dr Christine Rubie-Davies

Weblink: Access through EBSCO – see 'Accessing Papers' section above

This paper discusses high expectations in the classroom, what this may look like and the impact this can have on student achievement. Research into the effects of grouping by ability is shared including suggestions on how teachers can plan for and manage flexible grouping.

1. How do high expectation teachers differ from low expectation teachers?
2. What does the author state the impact is, on students who are grouped by ability?
3. What benefits does the author see to flexible grouping?
4. What suggestions does the author make regarding how flexible grouping is managed within the classroom?
5. To what extent do you agree with taking a more heterogeneous grouping approach to teaching numeracy and mathematics?
6. Summarise the key messages from the text.