Differentiation Reimagined: how theory of learning can inform effective adaptive classroom practice

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Summarized from Riordan and Convery 2022

Key words: adaptive teaching, differentiation, theories of learning

Introduction

Adaptive Teaching or Differentiation is a complex and contested concept in school-based education (Hart 1996), one that has become something of a contemporary hot topic (Smale-Jacobse et al. 2019) due to wide-ranging definitions of the term and its interpretations. Very little has been written about differentiation in the field of modern languages (ML) in the last 20 years (see Convery & Coyle 1999 or Jimenez Raya & Lamb 2003) and yet, all Government documents relating to teacher training place a big emphasis on this issue. The Carter Review of teacher training states that teachers should "ensure that all pupils in the class including lower and higher achievers, ... make progress and keep pace with the curriculum" (Carter, 2015, p.70). The Core Content Curriculum for ITT (DfE 2019) focuses on adapting teaching in a responsive way. The Teachers' Standard 5 (DfE 2011) expects teachers to know when and how to differentiate appropriately using approaches which enable pupils to be taught effectively.

Research into adaptive teaching was carried out with different cohorts of student teachers and their expert mentors. The researchers considered the importance of understanding learning theories to develop teachers' understanding of the concept of adaptive teaching. Three key theoretical concepts were explored and applied to teaching. Effective practical ideas and tasks were gathered from classroom observations and reflections.

Differentiation or Adaptive Teaching – what's in a name?

Recent Government policy developments show a replacement of the term differentiation in favour of adaptive teaching. Many of the ideas expressed by both terms are similar such as: students learn at different rates; they need different types of support; have different levels of prior attainment; can be flexibly grouped however, a shift in focus has been identified, most notably: providing targeted support for

learners who require it, enabling teachers to be more efficient in decision-making; spending more time interacting with learners; giving more 'wait time' and making sure all students receive enough praise and encouragement. There is a greater emphasis on adapting the learning in the moment, as you notice what your students are doing.

Definitions of Adaptive Teaching
The literature revealed that there are many different definitions of adaptive teaching, often complex and contested but with some commonalities between them, incorporating elements of 'good teaching'. These included giving general and individualized feedback; providing formative feedback through positive reinforcement and a positive learning environment. Researchers also advocated for collaborative learning; teacher questioning; peer tutoring; flexible grouping and active engagement. One definition that was particularly intuitive was based on Confucian philosophies of learning and cited by Professor Li Wei:

> "Vary the way you teach according to the person you teach; teach in a way that best suits the ability of the learner; teach in a way that makes the best use of the circumstance/context/material available" (Li Wei, 2021, p.35).

This explanation places the responsibility fairly and squarely on the shoulders of teachers and their professionalism. They make the decisions about how to teach based on their school context and the learners in front of them and their needs.

Learning theory and the practice of adaptive teaching
There are many different ways in which an understanding of learning theory can support teachers' work both in and out of the classroom. They can inform planning and teaching to construct the most effective learning opportunities for students or they can help explain how students gain knowledge and understanding. They can guide teacher responses to individual learners, assist in the diagnosis of in-class problems and help teachers to understand and evaluate their practice.

Following a review of the literature, the researchers identified links between social constructivist theoretical concepts and differentiation practices.

Vygotsky's 'Zone of Potential Development' (ZPD)
The first theory refers to Vygotsky's 'Zone of Potential Development' (ZPD) (1978) and is important for understanding how students can be helped to move forwards in their learning. Note the diagram below where the green circle represents students' current level of development i.e. what they can do now; The orange area, or the 'zone' is where teachers would want learners to be operating with additional support.

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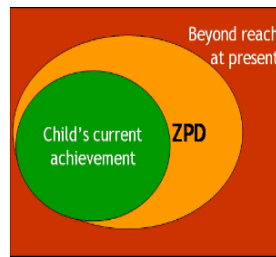
Some writers refer implicitly to this concept and refer to students working 'just above their individual comfort levels' or 'working at their point of need' or having a '+1' point. Vygotsky (1978) was convinced that children learn best when supported by a 'more knowledgeable other', i.e. the teacher.

In practice, this is exemplified by teachers creating tasks and activities which allow students to work together and discuss their learning, through pair and group work. They aim to pitch the lesson at the correct level: neither beyond the students' ZPD, in the red area nor below so students fail to make progress from where they are already at. When students are working collaboratively, the teacher can listen into these conversations and provide feedback on the go, redirecting and supporting.

Scaffolding

What was implied by Vygotsky (ibid) in terms of support was formalized by Wood et al. (1976) and Bruner (1983) and the term scaffolding was used. They identified several functions of the scaffolding process, for example, encouraging the student by giving them hints on getting started; breaking down the tasks; giving them prompts such as cue cards; marking critical features by sharing checklists or knowledge organisers; modelling an example answer and giving them encouragement through praise and rewards.

Teachers carry out elements of these theories by anticipating, at the planning stage, the difficulties learners may face and how to provide the appropriate support. They focus on the *processes* of learning, not just the learning itself. They create thinking skills and problem-solving approaches using metacognitive methods and they provide opportunities for challenge and motivation.

Bruner also introduced the concept theory of the spiral curriculum, where key grammar points or vocabulary are revisited throughout the curriculum developing in difficulty and applied to different situations and various scenarios.

Contingent Tutoring

Wood (1976) later developed the theory of scaffolding to include contingent tutoring. This refers specifically to the support offered on a one-to-one basis by the teacher when s/he sees that a student is struggling. This contingency leads to effective

adaptation when the teacher responds directly to the needs of the student, and is therefore different to the support offered by scaffolding which can often be planned in advance. Experienced teachers know when to intervene and notice when a student needs help and what form that might take.

Teachers can work at being proactive in advance of the lesson: such as identifying core learning and branching activities on lesson plans (Riordan and Convery 2022); breaking the learning down into manageable chunks; challenging all students and not just the more able. Teachers should try to avoid labelling learners as either low/middle/high ability, and to aim to challenge all learners irrespective of their individual levels of attainment. Similarly, all learners will at some point need to recap some of their learning; getting to know learners: their backgrounds, interests, knowledge and strengths; what do they already know and can they be stretched to the +1; and finally considering how to check the learning and provide feedback.

Having encouraged student teachers and their mentors to engage with the theoretical underpinnings of insights into children's learning we then focused our attention on applying this knowledge in the classroom. Student teachers, through reflective writings and task preparation attempted a range of strategies to adapt their teaching to their learners' needs. These included through text, task, outcome, support, resource, interest and choice. Below are two effective ways in which they adapted the learning.

Questioning
Adapting teacher questioning to individual students and varying the questioning is an effective strategy to involve all students in the lesson. Question types include closed (yes/no, either/or) or open (Where would you do this? When would you do it?); probing or follow-on and finding out questions; scaffolding questions by repeating and rephrasing; simplifying questions by using body language or allowing students to pass it on; giving wait time and opportunities for think, pair and share; allowing students to pose their own questions. To be proficient in questioning, the teacher has to have the expertise to judge how to pitch questions to each student's ZPD.

Pair and Group Work
Adapting the learning through pair work enables the teacher to move around the room, listening to students discuss with each other, monitoring their grasp of the issues, identifying possible areas of weakness that need further clarification. It frees the teacher from directly teaching to the whole class and they have the ability to provide individual feedback 'on the go'. For the learners it gives them the possibility of exploring new ideas or consolidating learning, without the spotlight of being in front of the whole class, empowering them to build their confidence. Group work offers all the advantages of pair work in addition to presenting motivating

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opportunities for students to demonstrate their creativity, independence, spontaneity, and collaborative skills.

Concluding Remarks

In conclusion, by using the theoretical knowledge available, teachers have a range of strategies to draw upon. It is important that teachers are allocated the time to access relevant theory on subject pedagogy. As a department there should be an agreed definition of their interpretation of adaptive learning suitable for their context and their students. In turn, they should respond to the individual needs of their learners and provide challenge and reinforcement for all their students by considering the core learning objective. Subsequently they will create branching activities which will allow all students to access the work to their own levels. And finally, they should provide formative assessment opportunities whilst giving constructive feedback.

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