# Curricular Progression and Pupil Learning: Towards a Method for Understanding how Pupils Progress in Learning Over Time.

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Majella Dempsey

## Introduction

Over recent years, several countries in Europe and elsewhere have seen a resurgent interest in the concept of learning progression and what it means to progress in learning.  Learning progressions, or 'progression frameworks', are typically thought about as optimised pathways along which pupils might be expected to progress towards greater sophistication in knowledge and skills.  They can be informed by or be the product of research and classroom evidence, and can be used to support effective teaching, learning and formative assessment.  They have also been critiqued for imposing a sense of linearity and predictability in learning as well as artificial ceilings that can be narrowing and reductive.  While many studies of learning progression are concerned with single concepts or ideas (e.g., progression in understanding the concept of matter), the notion that learning becomes more sophisticated is variously reflected in different country's curricula.

In recent years, some countries and jurisdictions have chosen to foreground ideas of learning progression as part of curriculum development and/or enactment.  One such

country is Wales which, following the publication of Successful Futures (2015), has embarked upon an ambitious programme of curricular reform in which the curriculum is structured around 6 areas of learning experience, each with its own set of progression frameworks.   Foregrounding progression in curricula opens up questions about the relationships between high-level curricular frameworks of progression, and how pupils actually learn over time in and across different subjects or curricular areas.  Does pupil learning develop as curricular progressions suggest?  We see these relationships as multifaceted, reified within processes of translation and enactment and variously influenced by complex factors.

Here, we present a study funded by the Carnegie Trust for the Universities of Scotland (RIG009335) that was undertaken to design a methodological approach for developing a rich understanding pupils' progression in learning.  It is set within the context of Welsh Educational reform and is designed to form part of a future and larger-scale longitudinal study that will follow individual pupils through several years and stages of a national education system in which learning progression is foregrounded.   We positioned this study by first exploring, challenging and making explicit our own understandings and assumptions about the nature of learning, its acquisitional and participatory natures and the socio-cultural context of classrooms.  Making progress in learning was seen as different to making progress in performance and we distinguish between 'learning progressions' as symbolic representations of possible ways learning might evolve, and the substantive learning of pupils which may or may not reflect these.  We considered the method in relation to three characteristically different areas of learning: Maths & Numeracy, Humanities, and Science & Technology.

Rather than testing the extent to which pupil learning reflects smaller-scale intervention type progression frameworks as explored in the review, or the extent to which assessed performances meet pre-determined outcomes, learning is viewed more holistically.  Here, it is seen as non-linear, mutable, involving misconceptions, confusion, gaps, connections, divergencies, emotion, realisation, and insight.  Rather than successive performances, progress in learning is seen as an epistemic process of meaning making.  While socially and culturally mediated, learning is seen as that which takes place in pupil's heads.  The approach does not prescribe or preclude any particular assessment or pedagogical approaches but accommodates these as part of curriculum is translated through practice.  We noted that almost all symbolic learning progressions rest upon a conventional empirical model of fixed time, but that this may not reflect the experience of pupils as they make meaning.   We therefor incorporate both fixed and fluid models of time (Neale, 2019).

## Method

We developed the methodology through three stages: (i) a knowledge building stage, (ii) a conceptualisation stage, and (iii) a critical refinement stage. The knowledge building phase considered evidence from research and practice. A review of literature examined different published studies on learning progression related to the curricular areas of Maths & Numeracy, Humanities, and Science & Technology. Papers were screened on the basis of relevancy. A search was undertaken using keyword combinations around learning progression for each of these and screening on the basis of relevancy resulted in 31 papers. A structured matrix approach was then used (Goldman & Schmalz, 2004) in conjunction with key questions about how, if at all, learning was conceptualised, what methods were used and how evidence was gathered and how changes in learning was represented. In addition to the review of research evidence, practice evidence was sought through six semi-

structured interviews with 2 teachers from each curricular area who taught at either primary or secondary level. An interview protocol was developed, piloted and refined with two additional teachers who were external to the study. The protocol promoted teachers to reflect on and give examples of how they knew their pupils were learning and making progress. Ethical approval was granted by the College of Social Sciences Ethics Committee and time was spent with participants beforehand to ensure that consent was fully informed and they were free to withdraw at any time without reason. Interviews were thematically analysed using a version of Braun & Clarke's (2006) six-step thematic analysis. During the conceptualisation phase, we reasoned critically, iteratively and in different ways by drawing on insights and messages from data and analyses. This was a process of dialogical reasoning done through a variety of activities including reading and re-reading the analyses of evidence, referring to supplementary methods texts, developing conceptual and relational maps, sketching out ideas, collaborative discussions and provocation, stepping back and on-going sense-checking with our initial positioning and assumptions. During the critical refinement stage, we solicited two independent reviewers to formally examine the proposed methodology and its associated reasoning. These were very experienced and established academics with expertise in pupil learning, progression, assessment. Their reviews and suggestions are being used to strengthen the methodology and, as this stage is on-going, we invite further thoughts and discussion to refine it further.


**Expected Outcomes**

There are five dimensions to the proposed methodology: 1. Co-Creation of Subject Epistemes These epistemes, drawing from the work on Adaptive Subject Pedagogy (Morrison-Love & Patrick, 2022) are representations of the knowledge and skills involved in learning something. They can suggest relationships, take a variety of forms but do not frame anything in terms of performance criteria or outcomes. They can be created with teachers and pupils and can evolve over time to provide a sense of scope for learning over different durations. 2. Contextual Evidence This is the gathering of linked, supplemental evidence from the policy-practice context within which learning is situated. These will influences learning in different ways and could include documentation, planning materials, discussions, policy and curricular materials, pedagogical approaches, resources and organisational arrangements. 3. Learning artefacts Learning artefacts are those things created as part of classroom learning and teaching and which can be analysed and discussed. They include things that pupils write, create, produce, complete and perform and so forth and will relate in some way to the processes of learning and episteme. 4. Pupil & Teacher Voice On-going dialogue is central to understanding meaning making and how learning develops. Learning artefacts will be used, in conjunction with protocols, to mediated discussions with pupils by reducing the level of abstraction and recall demand. Prompted and mediated discussions with teachers might also be mediated by contextual evidence. 5. Intensive over Extensive Exploratory Framing Intensive phases will involve more focused data gathering and mediated dialogue around particular or significant phases of learning. They will be sensitive to the idea of fluidity and 'time in events' and can be linked to avoid then being treated as instantaneous snap shots within the overall timeframe of the study (i.e. only seen as 'events in time').

## References

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