

# Visualizing Active Learning with Legitimation Code Theory

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## Abstract

Active Learning has become a popular buzzword in Japan and elsewhere. However, there is no agreed definition and many teachers are left to interpret this on a case by case basis. How do we know if our students will learn actively or have actively learned? Legitimation Code Theory (LCT) offers a way to visualize knowledge construction processes within a lesson activity through the language used to give a better insight into what active learning is and how activities might be used to encourage it. LCT extends ideas from the work of Bourdieu and Basil Bernstein developing theories and approaches from general education and educational sociology, and LCT allows for the evaluation of active learning within the second language classroom. Using the LCT concept of Semantic waves, several examples of real classroom activities are discussed in relation to how they supported or failed to support active learning.

## Example Observations

### 6<sup>th</sup> Grade Class at Elementary School

The lesson started with student led oral drills of previous vocabulary. Students then completed a few written drills in the textbook while teacher attempted to correct their work. This was followed by a reading aloud drill where students stood up in turn and read out a sentence. The lesson's main task was for students to work in groups to elaborate their views on the future, but confined to ES. One person reported back to class for each group.

### Language Class at University

Students answered some warm-up questions before watching a YouTube video on pollution. The students then attempted to answer some comprehension questions before watching the video for a second time. Students checked their answers as they watched it the second time comparing with each other. The teacher then checked the students' answers by playing the video again and stopping the video as each answer appeared. The class then moved on to an unrelated task.

### English Medium Instruction (EMI) Class at University

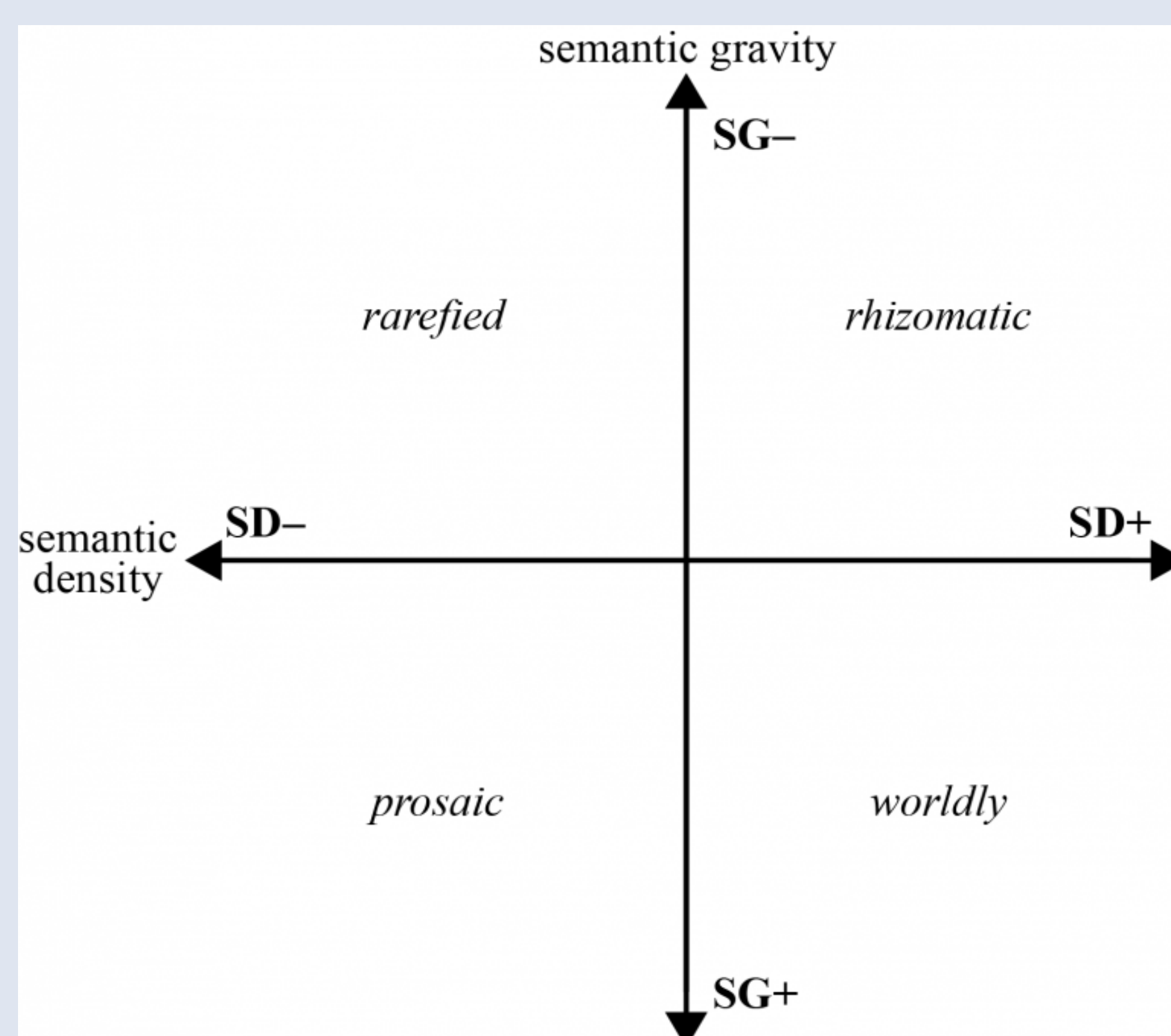
Students were set a reading for homework prior to class. Groups were formed and students discussed how to explain the concepts in the reading. Students then presented their explanation and examples to the class and these were discussed.

ESD	Type	Subtype	Sub-subtype
+	Technical	Conglomerate	-properties
			-elements
		Compact	-properties
	Everyday	Consolidated	specialist
			generalist
		Common	nuanced
-			plain

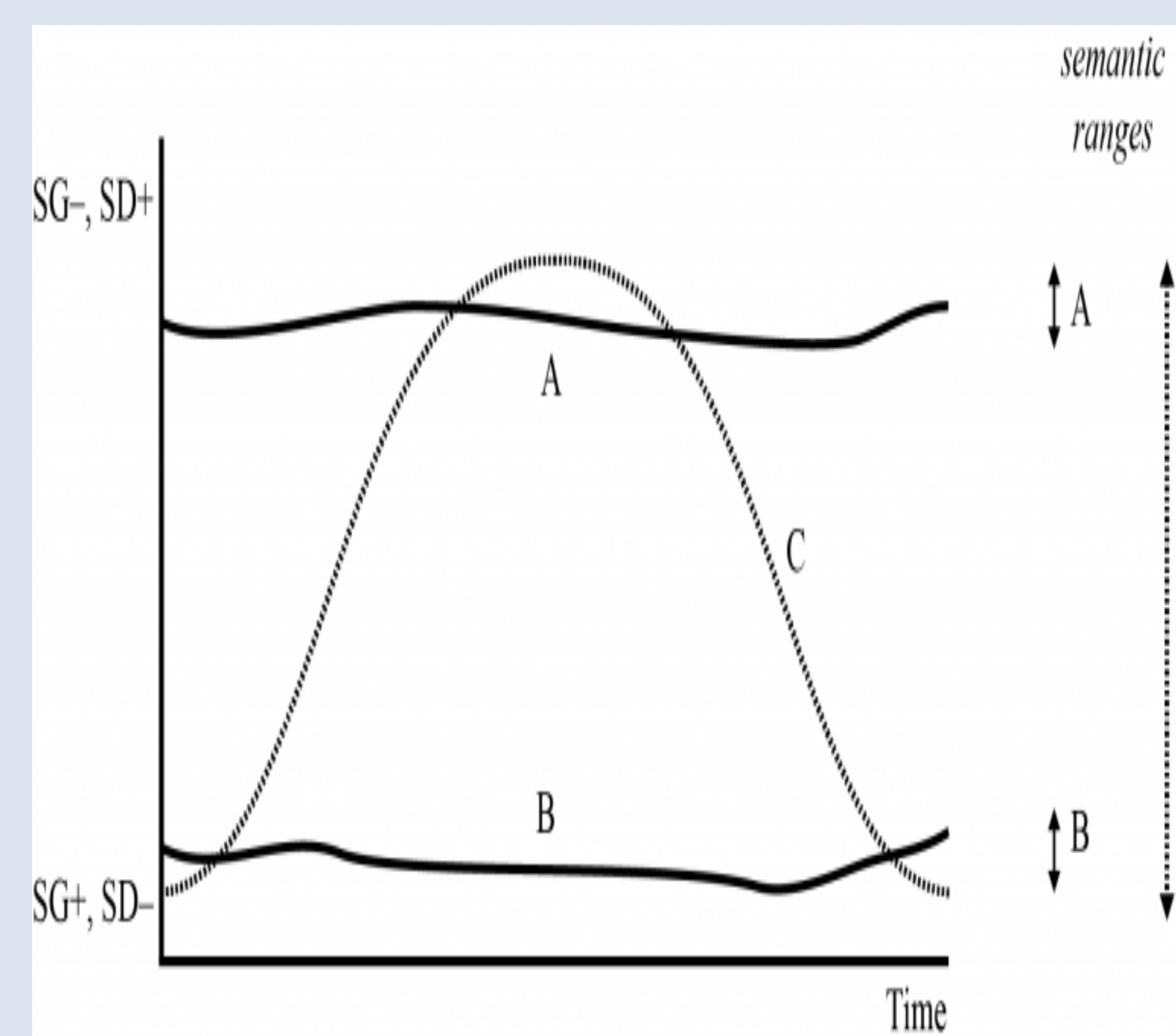
Maton, K. & Doran, Y.J. (2017) *Semantic density: A translation device for revealing complexity of knowledge practices in discourse, part 1 – wording, Onomázein, March: 46–76.\**

## Semantic Density & Translation Devices

Semantic density is a concept that encapsulates how abstract or condensed an idea is. The greater the semantic density, the more connections it makes with other ideas and pieces of knowledge. Semantically dense knowledge and ideas require exploration and unpacking to fully understand. Something that has a very low semantic density is everyday, empirically accessible to most people and requires little explanation. A translation device allows relative semantic densities to be coded and compared. Changes in relative values indicate knowledge construction processes being done (Maton 2013). This suggests that Active Learning may be visualized through relative changes in semantic density.

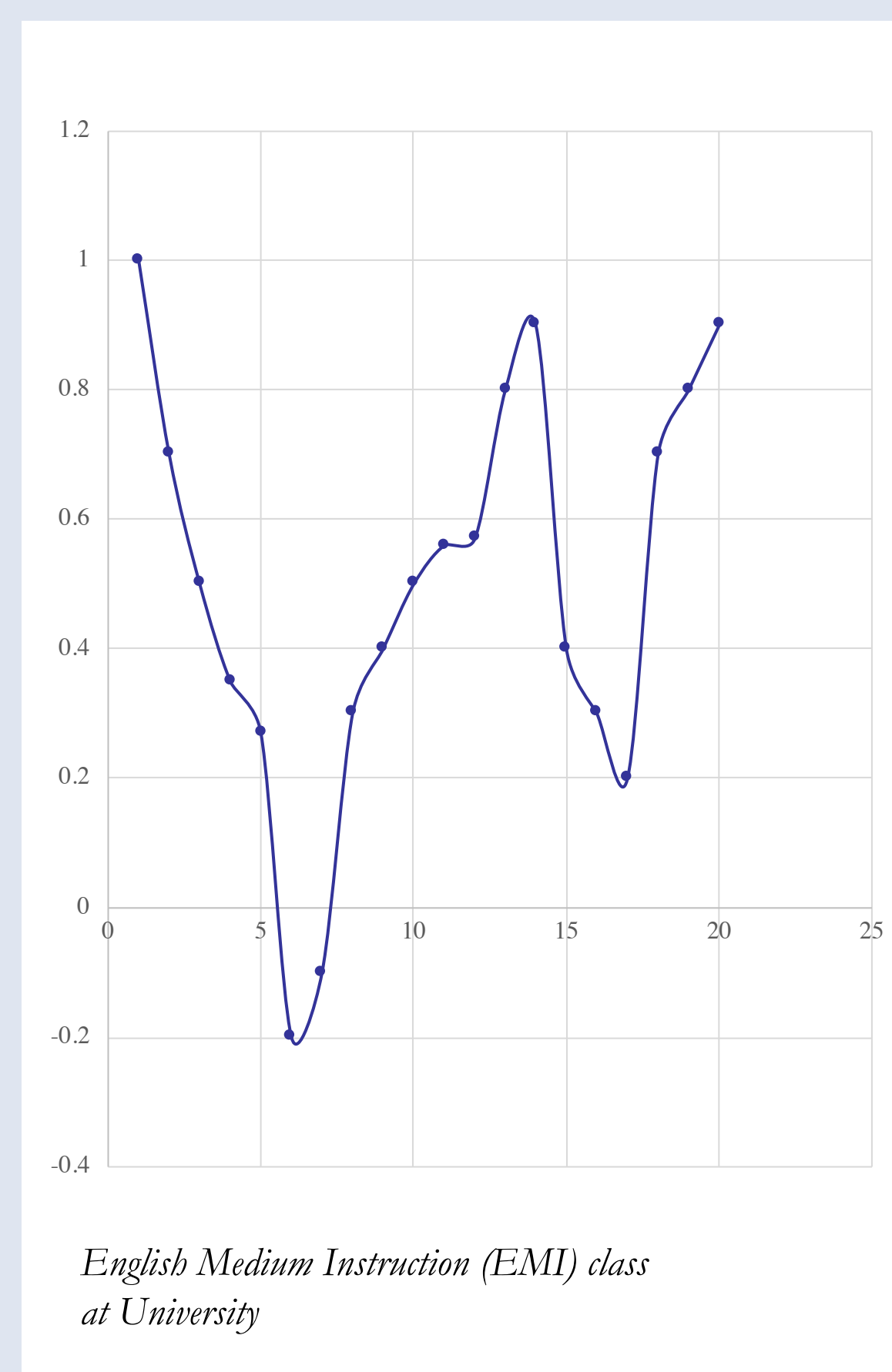
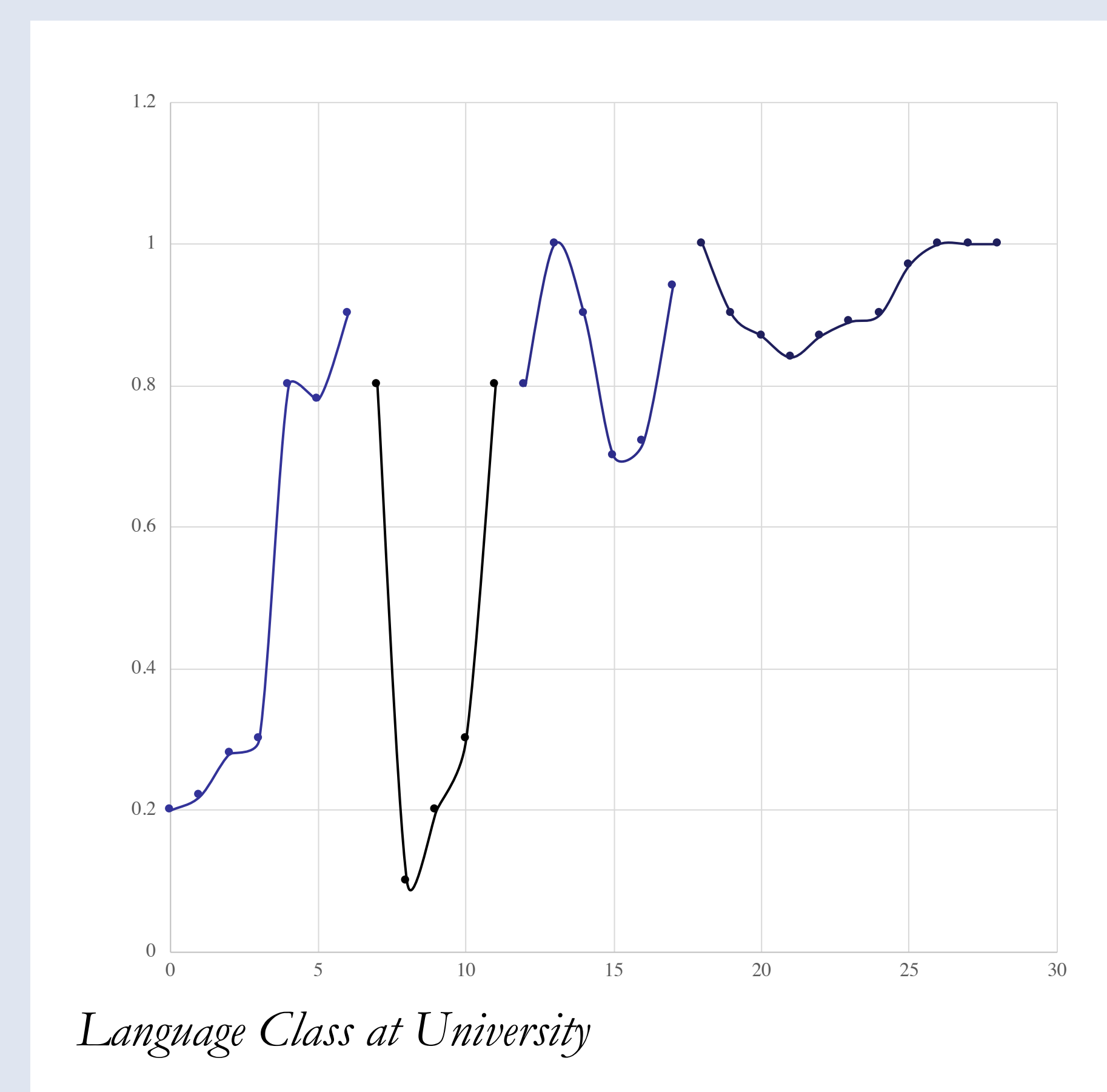
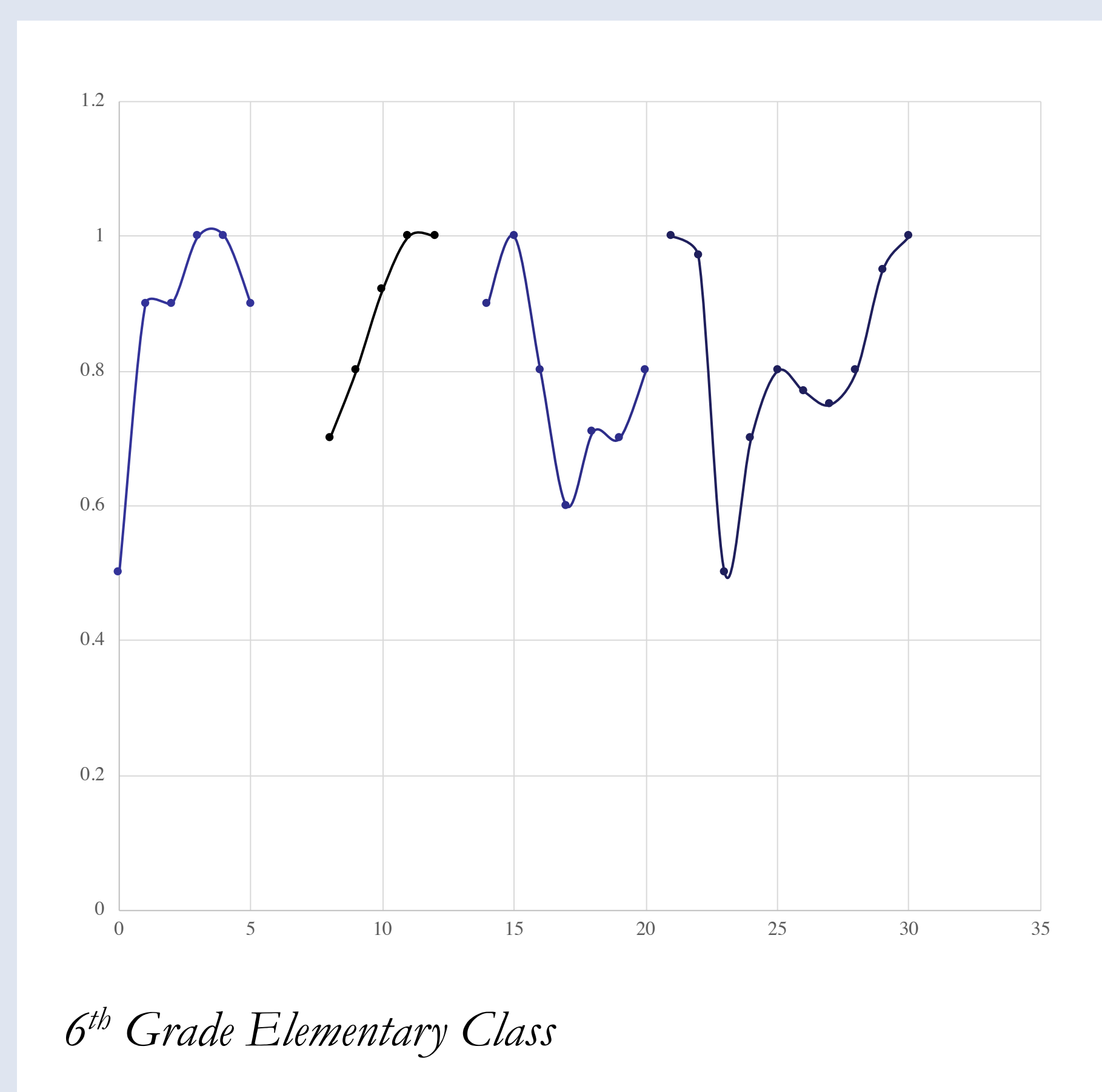


Maton, K. (2014) *Knowledge and Knowers: Towards a realist sociology of education*, London: Routledge, page 131.\*



Maton, K. (2013) *Making semantic waves: A key to cumulative knowledge-building*, *Linguistics and Education* 24: 18–22, page 13.\*

\* Illustrations above reproduced with permission courtesy of Prof. Karl Maton, University of Sydney



## Data Collection & Discussion

Data were collected in the form of audio recordings and observation notes for the university classes and observation notes for the elementary class. The data collected during the three observations were coded using an appropriate translation device for each context based on Georgiou (2016). The data indicate relative values on a scale of -1 to +1 rather than an absolute value. There were observable changes in semantic density throughout all of the learning activities. The chart for the elementary class reflects the highly routine nature of the class. The class provided little evidence of active learning. The language class showed some change associated with exploratory talk and the video task, while the EMI class showed much greater change in semantic density during the student led discussions. The EMI class displayed greater active learning reflecting the motivation of students in an elective class.

Georgiou, H. (2016). Putting physics knowledge in the hot seat: The semantics of student understandings of thermodynamics. In Maton, K., Hood, S., & Shay, S. (Eds.). (2016). *Knowledge-building: Educational studies in legitimation code theory*. Routledge.