

Title of Research Project: Irish Natural Survey of Scientific Inquiry

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Summary:

Major changes to the teaching and learning of Junior Cycle Science commenced through the new curriculum specification which began in September 2016. The specification places a significant focus on teaching and learning that is scientific inquiry oriented. The purpose of this phase of our longitudinal study was to ascertain the extent to which inquiry-based science education was practised in Ireland prior to the implementation of this new Junior Cycle Specification.

A mixed methods approach was utilised to achieve this. Data was gathered by way of a survey, completed by 2541 students and 77 teachers across 39 schools - a sample that was as nationally representative as practicable. The sampling period captured students in the latter stages of their second year, and early part of their third year during the final iteration of the previous curriculum. Our analysis of the data indicates that students held more negative perceptions of their levels of autonomy, in both the design and conduct of experimental activities in science class relative to their teachers. The analysis of the responses to open-ended questions on the survey indicated that only 12% of students felt they had a say in science class, and the vast majority of these students stated that they enjoy this practice. Of the remaining students (78%) who stated they do not have a say in science class, a quarter of this cohort are satisfied with the status quo.

This indicates a need for teachers to consider how best to support their students to take greater ownership of the learning process in the new Junior Cycle Specification. In the coming years, the survey process will be repeated to investigate what changes (if any) have occurred in the initial years of the implementation of the new specification.

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