

Seminars: A Tool for Improving Academic Confidence in Forensic Science Students

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ABSTRACT

The effects of seminar-assisted teaching are examined within groups studying Forensic Science courses in a Further Education College. Particular consideration is given to how academic confidence can be developed through discussion-based sessions that centre on contemporary topics related to, but not limited by, the academic scheme of work, termed 'seminars'. Academic confidence scores, measured through questionnaires, interviews and achievement rates indicated noteworthy increases in academic confidence, attendance and achievement after attending regular seminars. This action research explores the drivers and provides recommendations for attitudes to learning, particularly within the sciences.

Key words: seminars, teacher-researcher, self-efficacy, self-confidence, open discussion, inspiration, Higher Education [HE]

INTRODUCTION

Seminars are widely used similarly to tutorials in HE to supplement academic performance and wider knowledge of students, particularly within Higher education (Dennick and Exley, 2004). This study defines seminars as any session that discuss a topic from the academic scheme of work, but do so in a non-qualification, tutorial-like setting. The present work investigates the potential impacts and possible rewards for learners experiencing seminar-assisted teaching within a Further Education college.

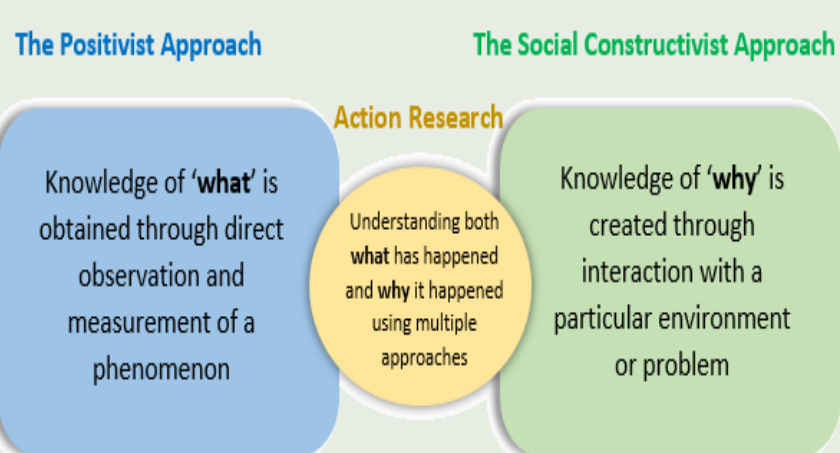


Figure 1: Aligning the epistemological approaches to research through Action Research

METHODOLOGY

- An action research method (Fig 1) was adopted to introduce a seminar intervention to Forensic Science teaching groups and observe the impacts.
- Attitudes to learning measured through questionnaires that provide confidence scores
- Further insight from interviews and system data

RESULTS

Academic confidence scores increased for all groups that received seminar interventions (Fig 2) but no increase was statistically significant.

Interviews revealed that students enjoyed open discussion aspects of seminars and this helped with their attitudes to further learning. Many described using ideas in discussions as a starting point for further research. This was termed 'inspiration'.

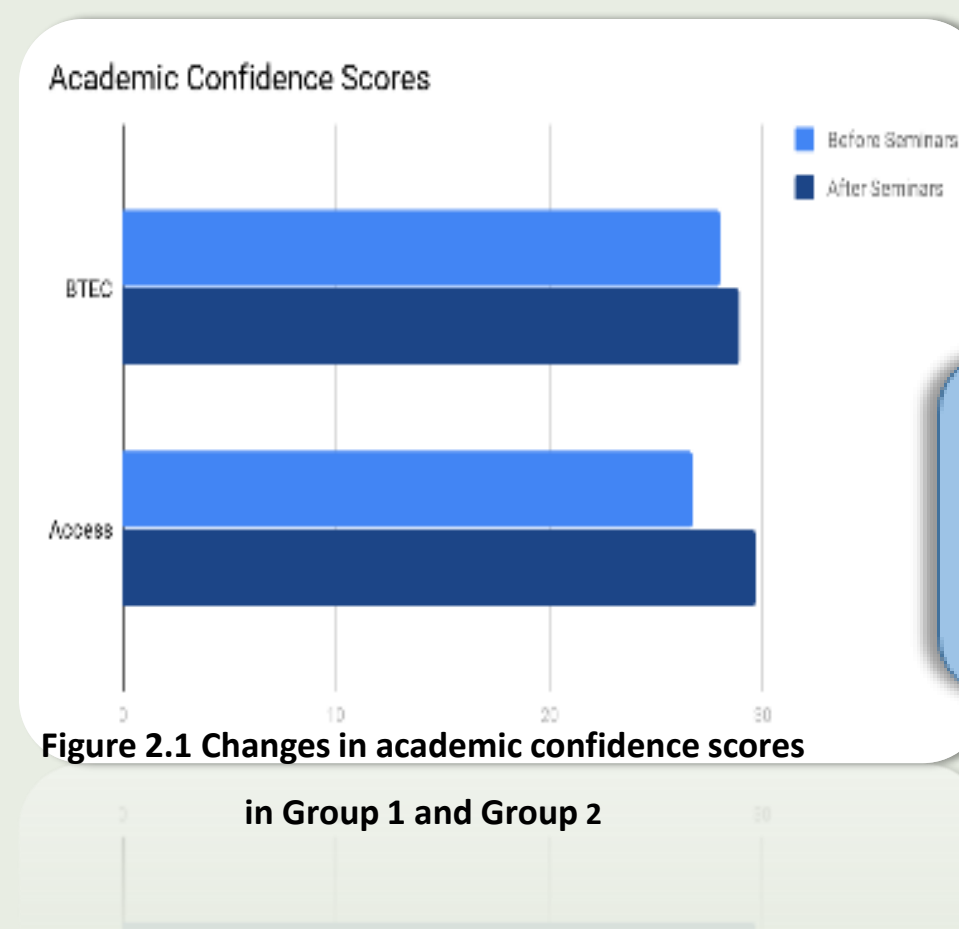
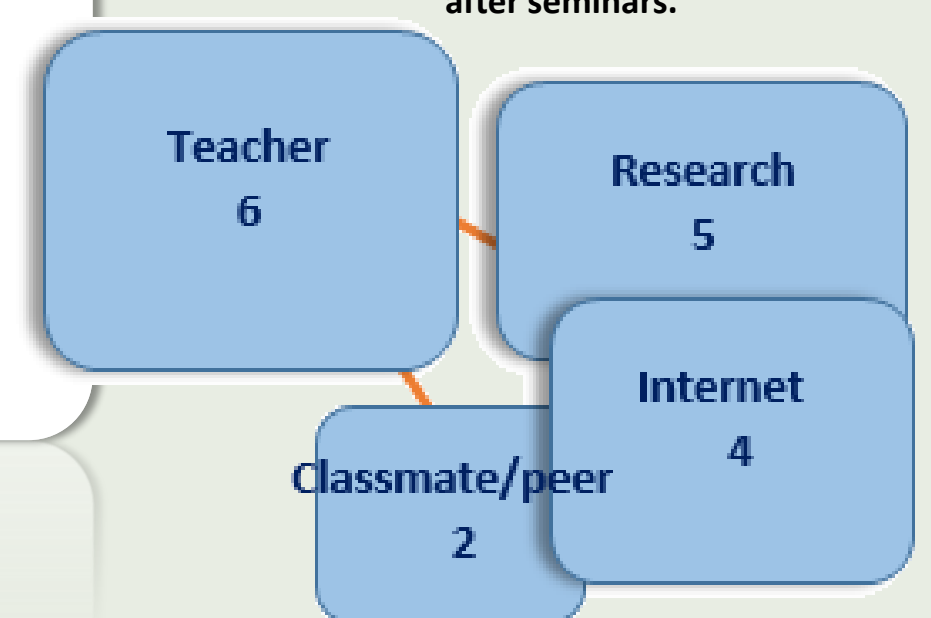


Figure 2.1 Changes in academic confidence scores in Group 1 and Group 2

Figure 2.2: Most common key terms (relative per group size) in survey answers after seminars.



Key findings were: increased 'inspiration' and positive attitudes to research.

Figure 4: Forensic science students engaging during lessons



Figure 3: Open Discussion in Seminar Sessions

CONCLUSIONS AND RECOMMENDATIONS

Feedback indicated that students used seminars as inspiration for further work. Quantitative findings supported this, showing increased attendance and retention. Seminars proved a useful teaching tool as students grew in motivation as well as **inspiration** as they observed the value of their contributions (Kline, 2009). Seminars appear to work best when implemented within teaching units rather than in separate tutorials. Students can also be encouraged to focus purely on discussions by using a minutes-taker. The sessions encouraged free-thinking and developed mature attitudes to further research. (Swain, 2008)(Williams et al., 2016)

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Images:

Figure 3 [Image]: Taty19555 (2013) Student Research union meeting. Accessed April 2018, from: https://upload.wikimedia.org/wikipedia/commons/c/c0/Student_research_union.jpg

Figure 4 [Image] Laurencin, J. (2018) Forensic Science Yr1 Students interacting in lessons

