Academic literacy and communicating assessment to students on L1 Science modules

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Problem Statement

Retention and progression are key challenges facing STEM subjects, particularly for Level 1 Science qualifications. Alteration of the student demographic and the university's open entry policy mean that there is a lower level of academic literacy (AL) among students on entry. Achieving success in early assessment is key to student retention. Module teams need to address the issue of AL development early and progressively in module development to ensure that students are equipped with the skills to understand what is required in assessment tasks and effectively demonstrate their understanding. To do this, an understanding must be reached of the level of AL entry level students present with relative to the requirements for success in L1 modules.

Key Term

Academic Literacy (AL): Academic Literacy is defined as the language and literacy skills required for and developed during academic study, to comprehend and produce a wide range of texts for a wide range of academic purposes in a particular discipline by engaging with the expectations, practices and needs of a wide range of audiences.

Study Background/Rationale

- AL skills are key predictors of successful progression in Science[1]
- Genre-based pedagogy has a positive effect on outcomes[2]
- Successful performance in assessment and preparedness are key to retention and progression
- Current L1 courses in production will need to address the AL skills gap in a systematic manner to achieve retention
- A 2014 study highlighted the importance of feedback strategy[3] but the scope did not include specific interventions prior to reaching assessment
- This study will address that area

eSTEeM
The OU centre for STEM pedagogy

Milestones

Literature Review

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Study of production course material in presentation at L1 to identify and map terminology

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Design and carry out survey of limited cohort of S104 15J intake to assess AL based on key assessment terminology identified

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Analyse survey and present summary results

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Produce final eSTEeM report

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Prepare and submit paper for external

Outcomes

1. Literature review
2. Science-relevant taxonomy of key terminology used in assessment
3. Quantitative/qualitative summary of students' understanding of key terminology on entry
4. Production of a strategy for assessment-focussed academic literacy development in L1 STEM subjects

Key Performance Indicators

- Literature review production
- Science-relevant taxonomy circulation
- Survey production
- Survey delivery and results summary presentation to L1 production module teams
- eSTEeM final report
- External research publication

Impacts

- Directly inform tuition strategy in S111 (16J) & S112 (17J)
- Inform wider strategy of assessment-relevant AL development (L1 Science)
- Bring consistency to assessment-relevant AL development by providing science-relevant taxonomy of terms
- Improved student performance and understanding assessment leading to improved student retention in entry level science
- Wider influence on assessment-relevant academic literacy development in higher education

References

1. Holder G.M., Jones J., Robinson R.A., Krass I (1999) *Academic literacy skills and progression rates among Pharmacy students* HERD Vol 18 No 1
2. Mort P. & Drury H. (2012) *Supporting student academic literacy in the disciplines using genre-based pedagogy*JALL Vol 6 No 3
3. Davey B. & Dommett E. (2014) *SDK125 Student Retention & Intentions Study* eSTEeM Final Report