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The dimensions underlying student attitudes and beliefs on authorship: An exploratory factor analysis of authorial identity in students. (0105)

Programme number: N6  
Research Domain: Learning, Teaching and Assessment

### **Introduction**

Plagiarism is commonly presented as an offence committed by individuals with a lack of integrity, often alongside outrage in the media, and with despair from academic tutors. A perceived increase in student plagiarism has led to many institutions taking steps to reduce plagiarism (Park, 2003). Although scholars have argued for holistic plagiarism policies that include pedagogy with traditional strategies (Macdonald & Carroll, 2006; Park, 2004), the 'deter and detect' conceptualisation of plagiarism remains dominant, alongside growing use of text matching technologies such as turnitin® (iparadigms, 2012). Current approaches focus on plagiarism as a negative behaviour to be discouraged; concerns have been raised that they are ineffective (Gullifer & Tyson, 2010), with some critics describing HE policies as putting the cart before the horse (McGowan, 2005). Moreover, there is evidence that use of text-matching software is not an effective deterrent of student plagiarism (Youmans, 2011).

Lack of authorial identity is an alternative way that plagiarism has been conceptualised; this approach suggests that plagiarism can occur when students fail to present themselves as authors in their writing (Abasi, Akbari & Graves, 2006). Defined as "the sense a writer has of themselves as an author and the textual identity they construct in their writing." (Pittam, Elander, Lusher, Fox & Payne, 2009, pp.153), authorial identity has been operationalised as a positive aim of education about plagiarism. A short intervention focussing on authorial identity in psychology students showed promising increases in measures of confidence in writing and knowledge to avoid plagiarism (Elander, Pittam, Lusher, Fox & Payne, 2010). Ballantine & Larres (2012) also compared authorial identity between different years of undergraduate accounting students; they found significant differences between the three years on a number of factors. However, the Student Authorship Questionnaire (SAQ) used to examine authorial identity in these studies (Pittam et al., 2009; Elander et al., 2010; Ballantine & Larres, 2012) has limitations as it was not developed systematically and has not been validated psychometrically. In light of this, the current study aimed to identify the dimensions underlying student authorial identity using a large sample of possible items.

### **Method**

An exploratory factor analysis approach was adopted to identify the dimensions underlying student attitudes and beliefs on authorship. Interviews with academics and focus groups with students were used to identify statements associated with authorial identity. This statement pool was presented to 12 subject matter experts (professional academics with experience of assessing undergraduate writing); they assessed the relevance of each statement in relation to Pittam et al.'s (2009) operational definition of authorial identity. These responses were analysed using a modified version of Lawshe's (1975) quantitative approach to content validity. Statements with sufficient content validity were collated together with six-point Likert scales ranging from strongly agree to strongly disagree, and then administered to a multidisciplinary sample of 439 students in higher education. Their responses were analysed using principal axes factor analysis and oblique rotation to identify an underlying factor structure; Horn's (1965) parallel analysis was used to discover a statistically robust factor model that accounted for the variance in students' responses. Items that did not contribute to

this stable structure were discarded; the remaining items are presented here as the Student Attitudes and Beliefs on Authorship Scale (SABAS).

## **Results**

### Item generation and content validity

The initial item pool was generated using the literature (Abasi et al., 2008; Pittam et al., 2009; Elander et al., 2010), and also from qualitative data collected in 28 one-to-one interviews with academics and four focus groups with students (n=11). This identified 106 statements understood to reflect authorial identity in students. Content validity ratings from the subject matter experts had high inter-rater reliability and the mean ratings were used to discard 62 statements that were not considered relevant to the authorial identity construct.

### Exploratory factor analysis

Initial analysis of the responses from students had a high estimate of internal consistency ( $\alpha=0.93$ ), suggesting that the items measured a single construct. Corrected item-total correlations varied in strength between 0.24 and 0.66. To increase internal consistency estimates, items with corrected item-total correlations below 0.40 were discarded, leaving 33 items ( $\alpha=0.94$ ) for exploratory factor analysis.

The Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of sphericity indicated that the data was suitable for factor analysis (KMO=0.911; Bartlett's chi square (1081) =8347.24,  $p<0.001$ ). Initial factor analysis using the Kaiser Eigenvalue greater than one rule (Kaiser, 1960) was used to obtain a scree plot. A visual inspection of the plot was ambiguous, suggesting three, four, or seven factors. Horn's (1975) parallel analysis using polychoric correlations identified a three factor solution as being statistically suitable, which was extracted with oblique rotation. Comrey & Lee (1992) suggest that factor loadings of 0.45 can be considered as fair; each factor in the extracted model had at least six items with loadings at this level or above, and minimal cross-loadings, suggesting a statistically robust structure. Data for items that did not load onto any factors at 0.45 or above (n=11) was discarded and factor extraction was re-conducted using the same parameters; this revised model had a further four items without factor loadings above 0.45, data for these items was also discarded before another analysis was conducted. The resulting model of 18 items showed three stable factors, with no cross loadings when considering loadings of 0.45 or higher. Internal consistency was high for data from the remaining items ( $\alpha=0.90$ ), moderately high for factor 1 (9 items,  $\alpha=0.86$ ) and factor 2 (5 items,  $\alpha=0.84$ ), and acceptable for factor 3 (4 items,  $\alpha=0.79$ ).

The factor loadings and items were interpreted as three salient facets of authorial identity. These three dimensions were given preliminary labels of 'Authorial Self-Efficacy', 'Valuing Authorial Skills', and 'Authorial Self- Identification'.

## **Discussion**

The findings of this study suggest that 'Authorial Self-Efficacy', 'Valuing Authorial Skills', and 'Authorial Self-Identification' underlie student attitudes and beliefs on authorship. This model provides a framework for further research and pedagogy using the authorial identity approach to plagiarism. Pedagogy targeting these three areas should be implemented to increase authorial identity. In addition, the 18 items used in this study can be collected together as a typical attitudes measure: the Student Attitudes & Beliefs on Authorship Scale (SABAS). Compared with the SAQ (Pittam et al., 2009), the SABAS has better validity due to the systematic approach to item generation. The SABAS is also statistically robust due to the rigorous application of exploratory factor analysis methods. This tool will allow reliable evaluation of interventions, and facilitate research to develop understanding of authorial identity as a psychological construct.

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