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**Academic boredom, approaches to learning and the final-year  
degree outcomes of undergraduate students**

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# Academic boredom, approaches to learning and the final-year degree outcomes of undergraduate students

## Abstract

*Academic boredom, the boredom experienced by undergraduates at university or college, is a complex but largely negative and disabling achievement-related emotion. In this mixed-methods study of 224 students attending a single institution in England, academic boredom was found to arise at the point of course delivery itself, while studying at other times, and during the completion of assignments for the purposes of assessment. Quantitative data from the BPS-UKHE and ASSIST questionnaires, meaningfully enriched with qualitative data from ten semi-structured research interviews, indicate that those with a measurably higher propensity or habitual disposition towards academic boredom than others were among the most adversely affected, displaying the deep, strategic and surface approaches and profiles of 'less effective learners'. This was reflected in, for example, their interest in ideas, their ability to organise resources and manage time, and what they had to memorise or do to 'get by' and pass, as well as their achievement motivation and sense of purpose. As an integral part of a greater emotional dynamic and evolving causal network, this translated into a corresponding reduction in average final degree mark and fewer 'good' degree awards. Recommendations surrounding the notion of boredom mitigation are presented which warrant serious consideration. With recent and growing levels of attention internationally, the work presented here makes an important contribution to a surprisingly neglected and underdeveloped field of UK higher education research and the student engagement agenda.*

Keywords: academic boredom, BPS-UKHE, approaches to learning, ASSIST, mixed-methods, student engagement

## Introduction and purpose

Recently identified as a complex but largely negative and disabling achievement-related emotion, academic boredom contributes usually adversely towards student engagement, learning and overall performance at university or college (Schutz and Decuir, 2002; Schutz and Pekrun, 2007; Linnenbrink-Garcia and Pekrun, 2011). Despite this, and the rapid growth in international interest witnessed over recent years (e.g. Acee et al., 2010; Goetz et al., 2014; Pekrun et al., 2014; Tze et al., 2014), the formal study of academic boredom among undergraduate students in the UK remains a surprisingly neglected and underdeveloped field (Mann and Robinson, 2009; Authors, 2015). By way of contrast, the approaches undergraduates adopt with respect to studying and learning, including their motivation and intentions for doing so, are particularly well documented and more comprehensively understood (e.g. Entwistle et al., 2000; Lizzio et al., 2002; Byrne et al., 2009; Diseth, 2013; Parpala et al., 2013; Teixeira et al., 2013). In this addition to our earlier contribution (Authors, 2016a), inspired by the related and insightful work of Trigwell et al. (2012) in Australia, the quantitative and qualitative relationships between academic boredom, approaches to learning and final year degree outcomes among 224 Education Studies students attending a single university in England are explored and presented together in detail for the first time. **As predicted by Control-Value Theory (Pekrun, 2000, 2006), where our work is located, it would not be considered unreasonable to presuppose that those respondents with a greater propensity or habitual disposition towards academic boredom than others also display the study habits of 'less effective learners', ultimately resulting in lower overall grades.** With perhaps profound implications for professional practice, recommendations surrounding boredom mitigation challenge cultural traditions and pedagogical norms.

## Review of literature

### *Academic boredom as state and trait*

Academic boredom, referring specifically to the boredom experienced by undergraduate students at university or college, has origins in the early studies of boredom in the workplace undertaken by psychologists, psychotherapists and psychiatrists leading up to and throughout the 1980s (e.g. Smith, 1981; Perkins and Hill, 1985; Moroldo, 1986). Already identified by then as a somewhat 'universal' phenomenon with complexly inter-related cognitive, affective, behavioural and motivational dimensions, the description of boredom as an elusive and aversive emotional state (the experience of feeling bored by any individual at any given moment in time), usually occurring within minutes of starting a frequently experienced task in which the pattern of sensory stimulation is nearly constant or highly repetitive, remains one of the most useful (O'Hanlon, 1981). Indeed, the first means by which boredom

could be easily and reliably measured as a trait (the recurring propensity or habitual disposition of any individual towards becoming bored) also came in the 1980s with publication of the Farmer and Sundberg (1986) Boredom Proneness Scale (BPS). Described more precisely as ‘an unpleasant, transient, affective state in which the individual feels a pervasive lack of interest in and difficulty concentrating on the current activity’ (Fisher, 1993: 396), boredom proneness became closely associated with a number of conditions including loneliness and withdrawal, anxiety, depression, neuroticism and stress, irritability and agitation, disruptive or aggressive behaviours, risk-taking, drug and alcohol abuse, smoking, gambling, over-eating, sexual promiscuity, self-harm and suicidal tendencies (e.g. Mikulas and Vodanovich, 1993; Darden and Marks, 1999; Watt and Vodanovich, 1999; Harris, 2000; Vodanovich, 2003a). Despite questions surrounding its age and other properties (Mercer-Lynn et al., 2011; Fahlman et al., 2013), the BPS remains very much in use today (e.g. Bruursema et al., 2011; Goldberg et al., 2011; Kass et al., 2011; Malkovsky et al., 2012), albeit in sometimes modified and more contextually appropriate forms including the BPS-UKHE adopted here (Authors, 2015).

### *Contemporary perspectives*

Until recently, and largely as a result of its portrayal as a ‘universal’ and multidimensional construct, with the attribution and misattribution of all manner of things to boredom and vice versa, attempts to reach any agreed definition or to locate boredom theoretically have proved particularly problematic (Vogel-Walcutt et al., 2012; Fahlman et al., 2013). In the form of an achievement-related emotion, however, academic boredom is now considered an intense and often brief psycho-physiological change arising in response to a supposedly meaningful educational event (Pekrun et al., 2002); that feeling of wanting but being unable to engage with something interesting or satisfying to do (after Eastwood et al., 2012). Similarly, and alongside other achievement-related emotions, both positive (e.g. hope, pride, joy, contentment, enthusiasm and relief) and negative (e.g. fear, frustration, hopelessness, guilt, shame, disappointment, dissatisfaction, resentment, envy and bafflement), academic boredom has become increasingly aligned with Control-Value Theory which acknowledges its complexity and hybridity in real-life educational settings (Pekrun, 2000, 2006). In essence, Control-Value Theory offers an important domain-specific

alternative to the more 'global' theories of adult and lifelong learning incorporating emotion (e.g. Illeris, 2003; Entwistle, 2009), making provision for the prediction of educational outcomes based upon the emotions aroused in relation to work undertaken and the importance attached to completing it. Summarised usefully by Ruthig et al. (2008), for example, students anticipate academic success or failure depending upon what they attribute to the successes or failures of the past and the extent to which they believe they can exert any influence over those personal or environmental factors considered responsible. Negative and normally disabling emotions like academic boredom are thought to impede the benefits of control, thereby leading to disengagement and under-achievement. Recent psychological studies involving students from Germany, Canada, the United States, the Philippines and China which empirically test statements or hypotheses derived from Control-Value Theory are now widely available (Acee et al. 2010; Goetz et al., 2010, 2014; Pekrun et al., 2009, 2010, 2014; Villavicencio and Bernardo, 2013; Tze et al. 2013, 2014). Including work conducted within the UK (Mann and Robinson, 2009; Authors, 2015, 2016a), academic boredom has revealed itself to arise in different places, at different times, in different ways and for many different reasons, all of which we shall return to later.

### *Deep, strategic and surface approaches to learning*

As indicated earlier, how students approach what they have to study and learn is a relatively mature field of higher education research (Entwistle et al., 2000; Lizzio et al., 2002; Entwistle and Peterson, 2004; Byrne et al., 2009; Entwistle, 2009; Diseth, 2002, 2007, 2013; Parpala et al., 2010, 2013; Teixeira et al., 2013). Approaches research has its own origins in the phenomenographic work of Marton and Säljö (1976a,b) and the outcomes arising from questions put to students after reading a passage of academic text. Two qualitatively different levels of processing were observed: one involving the search for author meaning and personal understanding, referred to now as a deep approach, the other simply committing text to memory for the purposes of reproduction, referred to now as a surface approach. A third and strategic approach, the intention to maximise the use of resources and study effort, was identified later (Entwistle and Ramsden, 1983; Biggs, 1987). The basic characteristics of each are summarised as shown (Table 1). While subsequent studies closely replicated the

original methodology of Marton and Säljö (e.g. Webb, 1997; Fryrenius et al., 2007; Karagiannopoulou and Entwistle, 2013), most now involve the use of questionnaire-type inventories (Biggs, 1993; Vermunt, 1998; Biggs et al. 2001; Entwistle and McCune, 2004; Richardson, 2004; Haggis, 2009; Mogashana et al., 2012) including the Approaches and Study Skills Inventory for Students adopted here (ASSIST: Tait et al. 1998; see also Diseth, 2001; Byrne et al., 2004; Cristina et al., 2010; Abedin et al., 2013; Bilgin et al., 2014).

**[Insert Table 1 as close to here as possible.]**

### *Course, task and assessment requirements*

At its most productive, **and with its own theoretical and conceptual framework in the motives, intentions and processes of studying to learn as influenced by the personal and environmental experiences of higher education (Entwistle and McCune, 2004; Entwistle, 2009)**, approaches to learning research has been used to identify the deep, strategic and surface profiles common to 'more effective' and 'less effective learners' and to consider student **responses and adaptations** towards specific course, task and assessment requirements across different disciplinary contexts and cultural boundaries (Richardson, 1994; Kember, 2000; Entwistle and Entwistle, 2003; Richardson and Price, 2003; Sadlo and Richardson, 2003; Minbashian et al., 2004; Reid et al., 2005; Baeton et al., 2010; Hamm and Robertson, 2010; Dennehy, 2014). This has found particular application operationally in terms of helping to ensure the constructive alignment between how courses are developed and received (Tait and Entwistle, 1996; Prosser and Trigwell, 1999; Trigwell et al., 1999; Entwistle, 2009; Biggs and Tang, 2011). In terms of academic achievement, students displaying stronger deep and strategic rather than surface profiles, or where flexibility and a range of different cognitive strategies are required, tend to do better than others, though outcomes can be highly variable (Kember et al., 1995; Kember, 1996; Scouller, 1998; Evans et al., 2003; Gijbels et al., 2005; Heikkilä and Lonka, 2007; Nelson Laird et al., 2008; Diseth, 2002, 2007, 2013; Campbell and Cabrera, 2014). The considerable body of evidence now available suggests that these profiles occur less as discrete entities and more of a continuum as study habits and practices evolve over time (Zeegers, 2001; Case and Gunstone, 2002; Case and Marshall, 2004; Vermunt and

Minnaert, 2003; Reid et al., 2005; Ballantine et al., 2008). In the study of performance outcomes among 388 first-year biology students at the University of Sydney reported by Trigwell et al. (2012), more positive emotions and the adoption of deeper over surface approaches were clearly associated with higher assessment scores and vice versa. Sharing many features in common (e.g. complexly inter-related cognitive, affective, behavioural and motivational dimensions), both academic boredom and approaches to learning are of sufficient importance in terms of student engagement to warrant further investigation in a single study.

## **Methodology**

### *Research design, sampling and ethics*

The work presented here forms part of an on-going mixed-methods research project intended to explore the relationship between academic boredom and the student experience of higher education (Authors, 2016a). Sequential in nature (Gorard, 2004; Johnson et al., 2007; Creswell and Plano-Clark, 2011), the quantitative data were generated first from a survey instrument incorporating the BPS-UKHE questionnaire to measure and interrogate academic trait boredom (Authors, 2015; details and scoring procedures in Appendix 1), and the ASSIST questionnaire to measure and interrogate deep, strategic and surface approaches to learning (Tait et al., 1998; details and scoring procedures in Appendix 2). The qualitative data, providing rich reflections on academic state boredom and meaningful insight into how respondents went about studying and preparing for assignments, arose from ten semi-structured research interviews conducted afterwards (Tashakkori and Teddlie, 1998; Greene, 2007). Final degree outcomes were obtained from student records with permission (as percentage scores and traditional degree classifications). **The sampling strategy adopted for both questionnaire distribution and the selection of participants for interview was both purposive and convenient (Cohen et al., 2011) with due consideration directed towards the overall aims of the project as a whole, its methodology and the elusive, transient and situated nature of academic boredom as described.** All of those involved were drawn from three cohorts of full-time, third and final-year undergraduates on a combined honours Education Studies programme at a single



university in England. Participation remained entirely voluntary and by self-selection with informed consent throughout. Ethical approval for the research was obtained in accordance with institutional policy informed by British Educational Research Association guidelines (BERA, 2011). While the BPS-UKHE was developed and validated with final year Education Studies students as part of the same project and at the same institution as the work undertaken here, and presented as a unitary or multidimensional construct with full-scale ( $\alpha=0.884$ ; 0.889 here), 5-factor ( $\alpha=0.851-0.625$ ) and 3-factor ( $\alpha=0.852-0.751$ ) 'short-form' solutions (Authors, 2016a), the ASSIST questionnaire was used with this sample group for the first time and interrogated using Principal Component Analysis (PCA) with oblique (oblimin) rotation (Field, 2013). Considering Kaiser's criterion (0.832), Bartlett's sphericity ( $2\lambda) = 1271.6$ ,  $df=78$ ,  $p<.001$ ), eigenvalues (greater than 1) and the scree plot, a three factor structure (replicating the deep, strategic and surface scales) was accepted (62.7% of the variance observed). Factor loadings, internal reliabilities (Cronbach's alpha) and other relevant statistics are provided as shown (Table 2). Overall outcomes compare favourably with other studies undertaken in a similar manner and with similar assumptions providing continuity with the wider body of research literature reviewed earlier.

### *Data collection and analysis*

380 initial survey instruments including the BPS-UKHE questionnaire were distributed *in situ* during whole-year lectures attached to an educational research methods module. As part of the initial survey, information was also collected about how much of the time specific methods of course delivery respondents found interesting or engaging, why some methods were favoured over others, and what coping strategies were adopted when actually bored. 380 ASSIST questionnaires were also distributed with others in group seminars over subsequent weeks. Overall, 309 survey instruments and 248 ASSIST questionnaires were completed and returned (response rates of 81.3% and 65.3% respectively) resulting in a subsample of 224 usable items against which degree outcomes could also be matched (58.9% of the students available). Quantitative data handling was carried out using SPSS (version 22) adopting parametric as well as non-parametric statistical tests including Bonferroni corrections and effect sizes where appropriate (Field, 2009). Presenting

with complete data sets and particularly high or low boredom proneness scores in order to help ensure sufficient differentiation in response (see next section), the ten respondents available and subsequently invited for interview included:

- Hannah, Heather, Harriet, Holly, Harry and Howie (four female and two male students with pseudonyms reflecting high BPS-UKHE scores e.g. 88 to 99);
- Lisa, Laura, Liam and Luke (two female and two male students with pseudonyms reflecting low BPS-UKHE scores e.g. 50 to 53).

The interviews themselves were conducted in a relaxed manner in private to ensure a free and 'interactional exchange of dialogue' (Mason, 2002: 62). While semi-structured in nature, recorded, and lasting up to one hour in duration, each interview remained sufficiently flexible for the discussion to 'roam' as appropriate (Powney and Watts, 1987; Fontana and Frey, 2000; Schostack, 2006). **Probing the motives, intentions, processes and adaptations associated with studying to learn, opening questions included:**

- As you approach the end of your degree, can you remember what it was that initially attracted you to study education in particular?
- Do you ever find yourself actually getting bored in a lecture/what do you tend to do as a result?
- How do you go about studying/preparing for and writing your assignments?
- What motivates you to keep going during an assignment?
- Do you find writing your assignments generally interesting/boring?
- What do you do with the assignment feedback you receive/how does it help when looking ahead to the next one?

Transcripts from audio-recordings were subsequently shared and analysed manually and conventionally by way of content analysis to identify emergent categories and themes (Saldaña, 2013; Miles et al., 2014).

## **Presentation of findings**

### *Respondent characteristics and boredom proneness categorisation*

Of the 224 respondents involved, 57 (25.4%) were male and 167 (74.6%) were female, figures typical of the degree programme as a whole. At the time of questionnaire distribution, ages ranged from 20 to over 40 with an estimated sample mean of 24.3 years. Used in full-scale form, the BPS-UKHE questionnaire measures academic trait boredom, the recurring propensity or habitual disposition of students towards becoming bored at university as determined by the frequency with which certain boredom precursors or antecedents reflected in the questionnaire items themselves are reported. Following reverse-item transformations, BPS-UKHE scores ranged from 41 to 122 (maximum possible range 28 to 140). These were spread around a mean of 71.9 (SD=13.37) and normally distributed (skewness=0.321, kurtosis=0.158). Following Mann and Robinson (2009), and maintaining consistency with our earlier work, three boredom proneness categories were established from a standard deviation split: low (mean score minus one standard deviation – included 37 respondents scoring 58 or less and measurably the least prone to academic boredom), intermediate (included 149 respondents scoring 59 to 85) and high (mean score plus one standard deviation – included 38 respondents scoring 86 or more and measurably the most prone to academic boredom). These three categories formed the basic units of all subsequent analyses and helped identify and select candidates for interview.

### *Initial course motivation*

The combined honours Education Studies programme at this particular university was a popular choice among students, offering a strong exit route to various teacher training courses upon completion of the degree. This was evident at interview but for different and sometimes personal reasons, with drivers ranging from the more intrinsic to the more extrinsic:

*'I was the first person to come to uni' out of my family ... Obviously I wanted a degree at the end of it. I think I wanted to prove to myself that I could do this because I was the first one ... I also wanted to teach and make new friends.'*  
(Lisa)

*'I worked previously at a bank ... I didn't really want to go any further in that industry, so it was basically for [a new] career, for a job.'* (Laura)

*'Because I knew I wanted to be a teacher, always have done, and had to have a degree basically ... Just knowing that to get this degree I'm another step closer to being what I want to be ... that's what keeps me going'* (Holly)

For some, initial course motivation was clearly influenced by several competing or complementary factors acting together at the same time. While course motivation can and does change over a three-year degree programme, it can also set the tone for how individuals interact with the teaching-learning environment.

### *Interactions with the teaching-learning environment*

Interactions with the teaching-learning environment are considered here with reference to the different methods of course delivery available and the extent to which these maintained interest or engagement (e.g. traditional whole-year lectures, interactive whole-year lectures, group seminars, individual tutorials, specialised practical input and the online materials posted on Blackboard - the institution's virtual learning environment). Traditional lectures with a perceived excess and inappropriate use of PowerPoint attracted particular criticism while contributing most to the actual onset of boredom itself:

*'I like PowerPoints but I don't like them just delivering a PowerPoint I could have just read ... I don't think lectures take me out of my comfort zone but sometimes I go out of my listening zone ... I think that's when I get bored ... I just think why am I here? ... So it's not that I get bored a lot ... I just lose my concentration.'* (Lisa)

With coping strategies included:

*'If it's something completely off topic, irrelevant to me, I switch off ... [I]f I've got a personal matter I'll take care of that by email or whatever. If I've got a deadline [assignment] I'll try and focus on doing that. If there's literally nothing else I'll end up doing Facebook ... [I]t makes me feel like it's a waste of money, a waste of time.'* (Howie)

Other contributing factors included the personal attributes and qualities of the lecturer, coherency and pace, the physical environment of the lecture theatre itself, and the size of the audience and behaviour of other students. In more detail, only 97 (43.3%)

respondents reported being interested or engaged in traditional lectures most or all of the time. More importantly, perhaps, and of the other 127 (56.7%), 27 were particularly prone to boredom (71.1% of the high category), 86 less so (57.7% of the intermediate category) and 14 least of all (37.8% of the low category), a significant difference repeated frequently throughout the study (Kruskal-Wallis  $\chi^2=18.689$ ,  $p<.001$ ). By way of contrast, 147 (65.6%) respondents reported being interested or engaged in group seminars most or all of the time. Of the other 77 (34.4%), 22 were particularly prone to boredom (57.9% of the high category), 51 less so (34.2% of the intermediate category) and only 4 least of all (10.8% of the low category). As well as affecting a greater proportion of those more prone to boredom than others, the ability to re-engage during traditional lectures was also notably different between groups. With further coping strategies included:

*'My mind wanders sometimes but I manage to refocus and I'm one of those people who can, even if I'm not directly listening. I can still seem to catch information ... but I don't know why, I just seem to be able to do it.'* (Liam)

*'I'm not taking anything in when I'm getting bored ... I doodle or clock watch ... or switch off ... it stops me falling asleep ... and then it's hard to get back into it again ... so I'm sort of walking out knowing the same as what I did when I walked in ... It sort of makes me feel like it's my fault, but if it doesn't interest me I get bored, there's nothing I can do.'* (Heather)

The onset and influence of academic boredom at the point of course delivery was far from trivial and not to be underestimated.

### *Approaches to learning*

Scale and subscale statistics associated with the ASSIST questionnaire are summarised as shown (Table 2) with the numerical data represented more visually for ease of interpretation and comparison (Figure 1).

- Deep

Deep scale items consider interest in academic ideas, how ideas relate to one another and stimulate thought, the nature of evidence and how it is used, and the desire to find

meaning and understand. Full-scale scores ranged from 7.0 to 20.0 (maximum possible range 4.0 to 20.0). These were spread around a mean of 14.64 (SD=2.217) and normally distributed (skewness=-0.282, kurtosis=0.513). They also correlated negatively with boredom proneness as anticipated ( $r=-.440$ ,  $p<.001$ ). Split by boredom proneness category, mean scores varied significantly from 16.07 (low) to 13.53 (high) indicating a moderate association (ANOVA  $F=15.399$ ,  $df=2,221$ ,  $p<.001$ ;  $\eta^2=.122$ ; greatest contrast between categories  $r=.505$ ).

Mean values across the four deep subscales indicated little variation from 14.84 ('interest in ideas') to 14.32 ('seeking meaning'). Their relationship with boredom proneness was, however, readily observed in the divergence or 'distances' observed between categories which, with the exception of 'use of evidence', were all statistically significant (Figure 1). For 'interest in ideas' in particular, which also exhibited the highest subscale-boredom correlation ( $r=-.512$ ,  $p<.001$ ), this was also reflected in the individual subscale items themselves. In terms of Item 52, for example, 'I sometimes get 'hooked' on academic topics and I feel I would like to keep on studying them', 129 (55.4%) respondents agreed. Of the other 95 (42.4%), 25 were particularly prone to boredom (65.8% of the high category), 63 less so (42.3% of the intermediate category) and 7 least of all (18.9% of the low category), a significant difference overall (Kruskal-Wallis  $\chi^2=19.344$ ,  $p<.001$ ). This was also generally supported at interview:

*'I like learning about anything, this is one of the reasons why I'm so passionate to do [a] Master's and ... Doctorate, I just, I wanna carry on learning, I mean, I'll be sad to see university go.'* (Liam)

**[Insert Table 2 as close to here as possible.]**

- Strategic

Strategic scale items consider the organisation and effort associated with studying, planning and preparing for assignments, considering assessment requirements, checking and proofreading work, learning from feedback, time management and achievement motivation. Full-scale scores ranged from 7.0 to 19.6 (maximum possible range 4.0 to 20.0). These were spread around a mean of 15.04 (SD=2.320),

normally distributed (skewness=-0.493, kurtosis=0.512), and also correlated negatively with boredom proneness as anticipated ( $r=-.517$ ,  $p<.001$ ). Split by boredom proneness category, mean scores varied significantly from 16.79 (low) to 13.30 (high), a moderate to strong association (ANOVA  $F=125.950$ ,  $df=2,221$ ,  $p<.001$ ;  $\eta^2=.190$ ; greatest contrast between categories  $r=.608$ ).

Mean values across the five strategic subscales varied slightly from 16.17 ('monitoring effectiveness') to 14.25 ('time management'). Their relationship with boredom proneness was also readily observed in the divergence or 'distances' observed between categories which, with the exception of 'alertness to assessment demands', were also statistically significant (Figure 1). For 'organised study', 'time management' and 'achievement motivation' in particular, which also exhibited the highest subscale-boredom correlations ( $r=-.415$ ,  $-.447$  and  $-.546$  respectively,  $p<.001$  in all instances), this too was reflected in the individual subscale items themselves. In terms of Item 24, for example, 'I feel that I am getting on well and this helps me to put in more effort', 135 (60.3%) respondents agreed. Of the other 89 (39.7%), 26 were particularly prone to boredom (68.4% of the high category), 58 less so (38.9% of the intermediate category) and only 5 least of all (13.5% of the low category), a significant difference overall (Kruskal-Wallis  $\chi^2=28.428$ ,  $p<.001$ ). The qualitative differences between groups across the subscales were also more apparent at interview and often blended with surface responses:

*'In the first year I found it really straight forward. But when I realised the work I was doing actually meant something to my degree I started to get a bit scared about that ... I want to get a better grade and I always aim to get a two-one [2:1] because I always think "if people get, like, two-twos [2:2s] ... that's nearly a third, nearly a fail" but I always want to better myself. So when I get a first or a two-one [2:1] it makes me feel better so that in the next assignment I want to carry on feeling this good.'* (Lisa)

*'I start off reading the assignment brief in detail ... the word limit ... what's expected of me, the grade boundary I aim for, the key features used ... I do a plan ... I kind of work as a whole, but I've got to work linearly ... I worry I'm not on the right lines. I just like to know what I've got to do ... [On feedback] Well, I'll read it through ... I'll have a little cry and rip it up and put it in the bin ... I read what was, like, good ... learn from that [and] know where I've gone wrong.'* (Harriet)

**[Insert Figure 1 as close to here as possible.]**

- Surface

Surface scale items consider the impact of feeling worried, overwhelmed or panicked, the desire for clarity particularly over assessment requirements, the breadth of study and what needs to be understood or committed to memory, and the point of being at university at all. Full-scale scores ranged from 4.8 to 19.0 (maximum possible range 4.0 to 20.0). These were spread around a mean of 11.94 (SD=2.157) and normally distributed (skewness=-0.219, kurtosis=0.361). On this occasion, surface scores correlated positively with boredom proneness as anticipated ( $r=.511$ ,  $p<.001$ ). Split by boredom proneness category, mean scores varied significantly from 9.95 (low) to 13.76 (high), a particularly strong association (ANOVA  $F=39.400$ ,  $df=2,221$ ,  $p<.001$ ;  $\eta^2=.263$ ; greatest contrast between categories  $r=.705$ ).

Mean values across the four surface subscales varied widely from 15.25 ('fear of failure') to 8.18 ('lack of purpose'). Unlike the deep and strategic subscale profiles presented, the surface subscales split by boredom proneness category were completely transposed (Figure 1). Their relationship with boredom proneness was particularly pronounced and, with the exception of 'fear of failure', all statistically significant. For 'syllabus boundedness', 'unrelated memorising' and 'lack of purpose' in particular, which also exhibited the highest subscale-boredom correlations ( $r=.345$ ,  $.382$  and  $.662$  respectively,  $p<.001$  in all instances), this too was reflected in the individual subscale items themselves. In terms of Item 3, for example, 'Often I find myself wondering whether the work I am doing here is really worthwhile', 106 (47.3%) respondents disagreed. Of the other 118 (52.7%), 35 were particularly prone to boredom (92.1% of the high category), 74 less so (49.7% of the intermediate category) and 9 least of all (24.3% of the low category), a significant difference overall (Kruskal-Wallis  $\chi^2=45.352$ ,  $p<.001$ ). At interview, surface responses were often blended with strategic and expressed more frequently among those more prone to academic boredom than others:



*'[I had to] resit my second year, I'd like to forget that happened ... I wasn't ready for it at all ... I don't like work where there's too much freedom [as I'm] worried if I don't get what you're after I'm going to fail it ... I hate re-reading my stuff. I'll just give it to a friend and say, like, "just check it all makes sense" ... I am worried about failing all the time ... I think I just doubt myself too much.'*  
(Holly)

*'I'm one of them who does like to have that pressure on me towards the last minute ... and work hard then ... [but] if I'm not interested I'll be like "please get this module over and done with, I've had enough" ... I know there's going to be people out there who've got better grades than me but I might have a better experience than them, so it's important but it's not the sole importance in life.'*  
(Howie)

### *Individual approaches profiles*

Instructive though it is to consider deep, strategic and surface approaches separately for the purposes of analysis, and to summarise and exemplify overall sample characteristics in detail, individuals are not defined by any one approach alone. To illustrate and emphasise the importance of this more fully, extended and annotated interview transcripts are presented from Luke and Hannah (Table 3). With no suggestion of any gendered association (they were simply the clearest examples available), these are considered side by side in order for direct comparisons to be made. Areas highlighted include initial course motivation, lectures and lecture boredom, how they studied and approached their work, assignment boredom and expectation. At the point of interview, Luke presented with a BPS-UKHE score of 53 and was assigned to the low category. His deep, strategic and surface ASSIST scores were 18.3, 15.4 and only 8.5 respectively. Hannah, on the other hand, presented with a BPS-UKHE score of 88 and was assigned to the high category. Her deep, strategic and surface ASSIST scores were 15.5, 14.4 and 15.5 respectively. Not only did Luke and Hannah differ markedly in terms of their scores on both instruments, the qualitative differences between them at interview were also striking. Following interview, Luke went on to achieve an overall final degree mark of 67% and was awarded an upper second class honours degree (2:1). Hannah went on to achieve an overall final degree mark of 49% and was awarded a third class honours degree (3).

**[Insert Table 3 as close to here as possible.]**

### *Student attainment and final year degree outcome*

The relationships between academic boredom, approaches to learning and final year degree outcome as a single and summative statement of overall academic performance are presented as shown (Figure 2). Despite some variation, those respondents assigned to the low boredom proneness category including Luke (see previous section) exhibited overall approaches profiles with relatively elevated deep and strategic scores and relatively depressed surface scores. Profiles like this are known to be broadly typical of 'highly effective learners'. Conversely, those respondents assigned to the high boredom proneness category including Hannah (see previous section) exhibited overall approaches profiles with relatively depressed deep and strategic values and relatively elevated surface values of an almost equivalent nature. Profiles like this are also known to be broadly typical of 'less effective learners'.

**[Insert Figure 2 as close to here as possible.]**

Final degree marks from all 224 respondents ranged from 38% to 80%. These were spread around a mean of 60.2% (SD=7.07%) and normally distributed (skewness=-0.144, kurtosis=-0.097). Split by boredom proneness category, however, means varied from 63.4% (low) to 55.6% (high), a significant 7.8 percentage point difference and moderate association (ANOVA  $F=14.855$ ,  $df=2,221$ ,  $p<.001$ ;  $\eta^2=.119$ ; greatest contrast between categories  $r=.561$ ). As determined by institutional regulations, this difference was observed more readily in degree classification. 33 (89.2%) of those in the low category achieved first and upper second class awards while 15 (39.5%) of those in the high category achieved upper second class awards only ( $\chi^2=20.097$ ,  $df=2$ ,  $p<.001$ ;  $V=0.300$ ). Determined largely by way of written assignments and presentations attached to twelve individual modules taken over two years, often requiring sustained levels of interest and engagement over sometimes lengthy periods of time to complete, academic boredom was almost certainly a contributing factor:

*'Most of them I find quite interesting. I find it quite tedious towards the end ... I think because I've been at it so long and you just want to be finished.'* (Laura)

*'Boring ... I put them off as long as I can 'cause ... it's just work and no one likes doing work ... I think there comes a time when you're just like, "oh, as long as it doesn't fail it's okay".'* (Harry)

For some, however, this was clearly determined by the assignment itself:

*'I think it depends on the topic. Like my dissertation [an independent research project]. I loved writing it because it was something I picked ... I do quite like sitting and typing away, I just get carried away with my thoughts ... and then I feel I'm being productive.'* (Holly)

Luke and Hannah's extended interview transcripts were also particularly instructive (Table 3).

A series of simple regression analyses using BPS-UKHE and ASSIST scores as predictors of final degree outcome were undertaken. Considered individually, boredom proneness and surface scales accounted for 13.9% ( $\beta=-.372$ ,  $t=-5.977$ ,  $p<.001$ ) and 5.3% ( $\beta=-.231$ ,  $t=-3.532$ ,  $p<.01$ ) of the overall variance observed ( $R^2$ ), both predicting negatively as indicated earlier (a greater tendency towards academic boredom and surface approaches associated with lower final grades). Deep and strategic scales accounted for 9.0% ( $\beta=.301$ ,  $t=4.700$ ,  $p<.001$ ) and 16.1% ( $\beta=.402$ ,  $t=6.534$ ,  $p<.001$ ) of the overall variance observed, both predicting positively as indicated earlier (a greater tendency towards deep and strategic approaches associated with higher final grades). Modelling all four scales together in a stepwise regression accounted for 20.4% of the overall variance observed but with only BPS-UKHE and strategic scores contributing significantly (see also Table 2 for correlations at scale and subscale level).

## **Discussion**

### *Summaries and scenarios*

Academic boredom is a complex but largely negative and disabling achievement-related emotion defined as an intense but often brief psycho-physiological change arising in response to a supposedly meaningful educational event (Pekrun et al., 2002). In this mixed-methods study of 224 final-year Education Studies students at a

single university in England, inspired by the work of Trigwell et al. (2012), the influence of academic boredom was particularly evident at the point of course delivery, with traditional lectures involving a perceived excess and inappropriate use of PowerPoint alongside other factors promoting generally lower levels of interest and engagement than other more interactive methods such as group seminars. As determined using the BPS-UKHE questionnaire (Authors, 2015), a greater proportion of those more prone to academic boredom than others were among the most adversely affected, a commonly repeated theme throughout. This was also evident at interview. In accordance with Control-Value Theory (Pekrun, 2000, 2006), and for many of those students feeling over- or under-challenged in particular, lower levels of arousal and attention resulted in a loss of concentration and focus. With time dragging by and minds wandering in the now tedious and confining environment of the lecture theatre, the search for meaningful things to do to relieve the monotony was often directed elsewhere, resulting in far from optimal conditions for learning and the actual onset of academic boredom itself (some coping strategies were adopted to avoid drowsiness and falling asleep, others resulted in productive coursework being undertaken). Now state-oriented rather than goal-oriented, and with a sense of 'disordered agency' (Eastwood et al., 2012), some were able to self-regulate and snap out of their boredom with ease; others, it would seem, were far less fortunate, simply 'switching off' or focusing more on mood and mood-monitoring than attempting to re-engage. Within the typology of academic state boredom presented by Goetz et al. (2014), such 'calibrating' and 'searching boredom' is described as a relatively common if largely unpleasant but bearable condition. In some instances, however, academic boredom resulted in a state of heightened arousal leading to frustration and a sense of hopelessness (e.g. a waste of time and effort). Despite differences in cultural context and specific detail (Tze et al., 2013), the findings here are broadly consistent with those reported from other countries by Pekrun et al. (2009, 2010), Acee et al. (2010) and Tze et al. (2014).

Beyond the lecture theatre, and also in accordance with Control-Value Theory, academic boredom was a factor associated with how respondents approached their work including the assignments used for assessment purposes. As determined using the ASSIST questionnaire, those considered more prone to academic boredom than others displayed the deep, strategic and surface profiles more common among 'less

effective learners' (Tait et al., 1998). This too was also evident at interview and in the extended transcripts from Luke and Hannah (Table 3). While broadly comparable in terms of their use of evidence, alertness to assessment demands and fear of failure (at least statistically), differences were most apparent in their interest in ideas and what they felt they had to do or memorise to 'get by' and pass, perhaps betraying something of their personal epistemologies and knowledge conceptions (Karagiannopoulou and Entwistle, 2013) as well as their personalities (Diseth, 2013). Equally importantly, differences were also reflected in their ability to organise resources and manage time, to monitor performance, their achievement motivation, and their overall sense of purpose. Within the teaching-learning environment of the university and beyond, it would seem, academic boredom was highly situated temporally as well as spatially, being course, task, study and assignment-related. As part of a greater emotional dynamic and evolving causal network, and for those more prone to academic boredom than others, this translated into an overall reduction in average final degree mark and fewer 'good' degree awards (see also Lizzio et al., 2002; Diseth, 2007; Campbell and Cabrera, 2014; Pekrun et al., 2014).

### *Intervention and prevention*

Based on the evidence presented here, and with reference to the research literature, boredom mitigation at university might begin by placing students at the heart of a transformational process which considers not only how courses are designed and delivered but how teaching for learning and assessment acknowledges its debilitating effects (e.g. Illeris, 2003; Ramsden, 2003; Entwistle, 2009; Biggs and Tang, 2011). With this in mind, why different forms of academic practice and interaction at university are adopted over others could certainly be more carefully articulated at induction when the process of academic socialisation for most students begins (Hughes and Smail, 2014). This might include, for example, the nature and purpose of lectures, seminars and tutorials and what they set out to achieve. The emotional demands of transitioning into and throughout higher education might also be addressed at much the same time (Christie et al., 2008; Kahu et al., 2015). Given the apparent lack of immunity of any student to academic boredom, albeit affecting some more frequently and more intensely than others, lecturers themselves need to remain mindful of the importance of when and how to introduce and sequence new content, particularly in the lecture

theatre, while at the same time considering more innovative and creative methods of instruction involving the use PowerPoint as a tool for disseminating information (e.g. avoiding 'dictation'). Lecturers might also remain mindful of the array of personal and environmental factors which affect the response, adaptation and intention of students towards specific educational goals and course, task and assessment requirements (Gijbels et al., 2005; Baeten et al., 2010). In terms of assessment, students might certainly benefit from being given more options to choose from and greater autonomy over what to do and how to do it, with support, while avoiding assessment overlap and overload and providing opportunity for the value of feedback to 'feed forward' (Scouller, 1998; Minbashian et al., 2004; Hamm and Robertson, 2010).

At the same time, students need to become more involved in their own courses and take more responsibility for their own learning, their meta-cognitive awareness extending to identifying and responding to academic boredom effectively. This could be helped by embedding study skills directly into courses while learning developers could be called upon to play a more front-line role in assisting with attribution retraining, goal setting and helping students to focus on the benefits of positive emotions, thereby improving resiliency and building confidence to help reduce the stress and fatigue which may damage self-esteem or self-worth (Pekrun et al., 2002; Vodanovich, 2003b; Ruthig et al., 2004, 2008; Goetz et al., 2010; Villavicencio and Bernardo, 2013). Students for whom academic boredom or studying or completing assignments proves particularly troublesome or who find themselves identified as 'at risk' of falling behind or terminating their studies altogether might certainly need the highly specialised help that many pastoral tutors may feel unqualified to provide (Tait and Entwistle, 1996). Students themselves are not always best placed to recognise their own emotions or to know what they mean or how to self-regulate. Many students present at counselling services with anxiety or depression, for example, but few attend because of academic boredom which can in extreme cases become chronic (Authors, 2016b). While the suggestions for intervention and prevention presented here might already be well established within the repertoires of many academic colleagues, some of this will make uncomfortable reading for others, perhaps challenging cultural traditions and pedagogical norms (Ashwin, 2015).

### *Limitations*

Our work here remains largely exploratory and inductive rather than deductive and explanatory in nature. While making no claim to fully capture the heterogeneity of higher education provision, the student population, or the complexity of human behaviour associated with studying, learning and being a student, it does, nevertheless, provide a valuable baseline against which future findings might be considered and compared. Despite recent advances within the field, however, this should be undertaken with care. Quantitative data, mainly derived from the BPS-UKHE and ASSIST questionnaires, relied upon self-reporting from self-selecting students in the main, assuming a common reception and understanding of statements and terms. Despite a mixed-methods design, the small number of interviews conducted provided only limited opportunities for the independent verification of information relying often instead on the retrospective attribution of meaning. The influence of academic boredom and approaches to learning on overall performance used only final-year degree outcome as a single and summative measure and statement of achievement. Pointing towards future research endeavours, longitudinal, cross-sectional and experimental studies would allow the anticipatory emotions students experience ahead of specific learning events and the outcome emotions which follow to be brought into sharper focus as well as to illuminate and highlight more of the exact nature and direction of academic boredom as a causal agent (e.g. direct, indirect, reciprocal or mutually reinforcing).

## **Conclusions**

Given the emergence of academic boredom onto the international stage only recently, the work presented arguably makes an important empirical, methodological and theoretical contribution to a surprisingly neglected and underdeveloped field of higher education research in the UK. It also resonates strongly with and addresses certain elements of the UK student engagement agenda (Trowler, 2010). As indicated by Pekrun (2006: 333-334), for example:

*'Emotions are of primary educational importance for two reasons. First, as implied by Control-Value Theory, emotions can affect students' interest, engagement, achievement and personality development, as well as the social*

*climate in classrooms and educational institutions ... Second ... emotions are central to psychological health and well-being, implying that they should be regarded as important educational outcomes in themselves, independent of their functional relevance.'*

While acknowledging the limitations of our work and its interpretation, evidence in both the quantitative and qualitative data presented extends our knowledge and understanding not only of where, when, how and why academic boredom arises but something too of its influence and consequences, providing valuable clues for how to mitigate against some of its more adverse and potentially damaging effects. Considered together, and in terms of their various correlations and associations, academic boredom and the approaches students adopt when studying and learning offer considerable diagnostic as well as predictive potential. How students engage emotionally with the teaching-learning environment at university and beyond certainly deserves more attention than it currently receives.

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## Appendix 1: Boredom survey instrument with BPS-UKHE

### (a) BPS-UKHE questionnaire

Scale: A – Always (Score 5), B – Usually (Score 4), C – Occasionally (Score 3), D – Rarely (Score 2), E – Never (Score 1)

- 
1. At university, I find it easy to concentrate on my work and other activities.\*
  2. When I am working at university, I find myself worrying about other things.
  3. Time seems to pass by slowly for me at university.
  4. At university, I find myself at a 'loose end' not knowing what to do.
  5. At university, I find myself trapped in situations where I have to do meaningless things.
  6. Having to read someone else's course work or watch their presentation and listen to what they have to say bores me tremendously.
  7. At university, I have no shortage of projects in mind and things to do.\*
  8. I find it easy to entertain and motivate myself at university.\*
  9. At university, many things I have to do are repetitive and monotonous.
  10. At university, it takes more stimulation to get me going than most people.
  11. At university, I get a kick out of most things I do.\*
  12. I find it difficult to get excited about my work at university.
  13. In any situation at university, I can find something to do or see to keep me interested.\*
  14. At university, I find myself just sitting around doing nothing.
  15. At university, I am good at waiting patiently.\*
  16. At university, I often find myself with time on my hands and nothing to do.
  17. In situations where I have to wait I get very restless.
  18. I often wake up with a new idea for work and other activities at university.\*
  19. At university, it is very hard for me to find a task that is exciting enough.
  20. I would like more challenging things to do at university.
  21. At university, I feel that I am working below my ability and not stretched enough.
  22. People at university would say that I am a creative or imaginative person.\*
  23. I have so many interests at university I don't have time to do everything.\*
  24. Among my friends at university, I am the one who keeps doing something the longest.\*
  25. Unless I am doing something exciting at university I feel half dead and dull.
  26. It takes a lot of change and variety at university to keep me really happy.
  27. At university it seems that we do the same things all the time - it's getting old.
  28. I've found everything about university monotonous and tiresome.
- 

Source: Authors (2015) after the BPS of Farmer and Sundberg (1986).

Scoring procedure: transform reverse score items (\*) before adding all 28 individual item-scores together.

### (b) How much of the time does each different method of course delivery interest or engage you?

- traditional whole year lectures, interactive whole-year lectures, group seminars, individual tutorials, specialised practical input, online materials via the VLE (Blackboard)

Scale: A – All of the time (Score 5), B – Most of the time (Score 4), C – About half of the time (Score 3), D – Some of the time (Score 2), E – Never (Score 1)

### (c) List up to three factors which make whole year lectures/smaller group sessions particularly interesting or engaging/dull or boring.

### (d) If you find whole year lectures/smaller group sessions particularly dull or boring what do you tend to do most?

- daydream, switch off, doodle over handouts, talk to the person next to you, text, leave at the break, other (specify)

## Appendix 2: The ASSIST questionnaire (Part B)

Scale: A – Agree (Score 5), B – Agree somewhat (Score 4), C – Not sure (Score 3), D – Disagree somewhat (Score 2), E – Disagree (Score 1)

- 
1. I manage to find conditions for studying which allow me to get on with my work easier.
  2. When working on an assignment, I'm keeping in mind how best to impress the marker.
  3. Often I find myself wondering whether the work I am doing here is really worthwhile.
  4. I usually set out to understand for myself the meaning of what we have to learn.
  5. I organise my study time carefully to make the best use of it.
  6. I find I have to concentrate on just memorising a good deal of what I have to learn.
  7. I go over the work I've done carefully to check the reasoning and that it makes sense.
  8. Often I feel I'm drowning in the sheer amount of material we have to cope with.
  9. I look at the evidence carefully and try to reach my own conclusion about what I'm studying.
  10. It's important for me to feel that I'm doing as well as I really can on this course.
  11. I try to relate ideas I come across to those in other topics whenever possible.
  12. I tend to read very little beyond what is actually required to pass.
  13. Regularly I find myself thinking about ideas from lectures when I'm doing other things.
  14. I think I'm quite systematic and organised when it comes to revising for assignments and exams.
  15. I look carefully at tutors' comments on course work to see how to get higher marks next time.
  16. There's not much of the work here that I find interesting.
  17. When I read an article or book I try to find out for myself exactly what the author means.
  18. I'm pretty good at getting down to work whenever I need to.
  19. Much of what I'm studying makes little sense. It's like unrelated bits and pieces.
  20. I think about what I want to get out of this course to keep my studying well focused.
  21. When I'm working on a new topic I try to see in my own mind how all the ideas fit together.
  22. I often worry about whether I'll ever be able to cope with the work properly.
  23. Often I find myself questioning things I hear in lectures and seminars or read in books.
  24. I feel that I am getting on well and this helps me to put in more effort.
  25. I concentrate on learning just those bits of information I have to know to pass.
  26. I find that studying academic topics can be quite exciting at times.
  27. I'm good at following up some of the reading suggested by tutors.
  28. I keep in mind who is going to mark my work and what they're likely to be looking for.
  29. When I look back I sometimes wonder why I ever decided to come here.
  30. When I am reading, I stop from time to time to reflect on what I am trying to learn from it.
  31. I work steadily through the semester rather than leave it all until the last minute.
  32. I'm not really sure what's important in lectures and seminars so I try to get down all I can.
  33. Ideas in books and articles often set me off on long chains of thought of my own.
  34. Before starting work on an assignment or exam question I think first how best to tackle it.
  35. I often seem to panic if I get behind with my work.
  36. When I read, I examine the details carefully to see how they fit in with what's being said.
  37. I put a lot of effort into studying because I'm determined to do well.
  38. I gear my studying closely to just what seems to be required for assignments and exams.
  39. Some of the ideas I come across on the course I find really gripping.
  40. I usually plan out my week's work in advance, either on paper or in my head.
  41. I keep an eye open for what tutors seem to think is important and concentrate on that.
  42. I'm not really interested in this course at all, but I have to take it for other reasons.
  43. Before tackling a problem or assignment I first try to work out what lies behind it.
  44. I generally make good use of my time during the day.
  45. I often have trouble making sense of the things I have to remember.
  46. I like to play around with ideas of my own even if they don't get me very far.

47. When I finish a piece of work, I check it through to see if it really meets the requirements.  
48. Often I lie awake worrying about work I think I won't be able to do.  
49. It's important for me to be able to follow the argument, or to see the reason behind things.  
50. I don't find it at all difficult to motivate myself.  
51. I like to be told precisely what to do in assignments.  
52. I sometimes get 'hooked' on academic topics and I feel I would like to keep on studying them.
- 

Source: Tait et al. (1998).

Deep approach subscales:

- Seeking meaning (Items 4, 17, 30, 43)
- Relating ideas (Items 11, 21, 33, 46)
- Use of evidence (Items 9, 23, 36, 49)
- Interest in ideas (Items 13, 26, 39, 52)

Strategic approach subscales:

- Organised studying (Items 1, 14, 27, 40)
- Time management (Items 5, 18, 31, 44)
- Alertness to assessment demands (Items 2, 15, 28, 41)
- Achievement motivation (Items 10, 24, 37, 50)
- Monitoring effectiveness (Items 7, 20, 34, 47)

Surface approach subscales:

- Lack of purpose (Items 3, 16, 29, 42)
- Unrelated memorising (Items 6, 19, 32, 45)
- Syllabus-boundedness (Items 12, 25, 38, 51)
- Fear of failure (Items 8, 22, 35, 48)

Scoring procedure: subscales - all relevant item-scores added together; scales - all relevant subscale scores added together then divide by the number of individual subscales to obtain a mean average.

Deep	Strategic	Surface
<p data-bbox="203 483 786 544">Basic intention to actively construct meaning and understanding for oneself:</p> <ul data-bbox="253 579 786 1023" style="list-style-type: none"> <li>• naturally motivated, interested and engaged</li> <li>• works beyond immediate requirements</li> <li>• questioning and reflective</li> <li>• able to relate ideas to previous knowledge and experience</li> <li>• looks for patterns and principles</li> <li>• sees structure and coherency</li> <li>• uses evidence and makes connections to inform work</li> <li>• explores reason, logic, argument and conclusions critically</li> <li>• learns by rote where appropriate</li> <li>• reflective</li> </ul>	<p data-bbox="819 483 1346 544">Basic intention to maximise effort to support learning and achievement:</p> <ul data-bbox="869 579 1368 962" style="list-style-type: none"> <li>• intrinsically and extrinsically motivated</li> <li>• systematic and self-evaluative</li> <li>• focused and determined</li> <li>• planned and organised</li> <li>• manages resources including time effectively</li> <li>• alert to academic environment and assessment demands</li> <li>• tasks enhance learning</li> <li>• monitors progress</li> <li>• thoughtful and thorough</li> <li>• metacognitively aware</li> </ul>	<p data-bbox="1440 483 1951 544">Basic intention to cope with immediate task demands and course requirements:</p> <ul data-bbox="1489 579 2018 962" style="list-style-type: none"> <li>• requires external stimulus for motivation</li> <li>• seeks breadth rather than depth</li> <li>• sees words and text rather than meaning</li> <li>• learns by rote and with difficulty</li> <li>• memorises unrelated bits of knowledge</li> <li>• reproduces quotes or examples</li> <li>• studies without reflection</li> <li>• failure to make spot relevance or make connections</li> <li>• often misses the point</li> <li>• misdirected or unproductive effort</li> <li>• feels under pressure and worries</li> </ul>

Table 1 General approach characteristics (after Marton and Säljö 1976a,b; Ramsden, 2003; Entwistle, 2009; Biggs and Tang, 2011)

Scale	Subscale	Boredom proneness category <sup>†</sup>				Subscale characteristics and correlations			
		Mean score (SD)	Low (SD)	Intermediate (SD)	High (SD)	Skewness	Kurtosis	BPS-UKHE correlation <sup>‡</sup>	Degree correlation <sup>‡</sup>
Deep (mean 14.64)	Interest in ideas	14.84 (2.872)	16.73 (2.219)	14.94 (2.521)	12.63*** (3.300)	-0.393	0.028	-.512***	.294***
	Use of evidence	14.83 (2.276)	15.81 (2.039)	14.75 (2.079)	14.21 <sup>ns</sup> (2.915)	-0.271	0.593	-.271***	.249***
	Relating ideas	14.55 (2.649)	15.95 (2.549)	14.40 (2.541)	13.82** (2.749)	-0.287	-0.132	-.274***	.176**
	Seeking meaning	14.32 (2.527)	15.78 (2.562)	14.17 (2.318)	13.45*** (2.758)	-0.421	0.474	-.367***	.269***
Strategic (mean 15.04)	Monitoring effectiveness	16.17 (2.529)	17.73 (2.219)	16.15 (2.283)	14.74*** (2.892)	-0.950	1.217	-.379***	.302***
	Achievement motivation	15.29 (2.670)	17.41 (1.936)	15.32 (2.346)	13.11*** (2.817)	-0.360	-0.182	-.546***	.403***
	Alertness to assessment demands	14.99 (2.574)	15.78 (2.323)	15.14 (2.450)	13.61 <sup>ns</sup> (2.824)	-0.200	-0.139	-.259***	.318***
	Organised studying	14.48 (3.050)	16.32 (2.991)	14.42 (2.749)	12.92*** (3.348)	-0.222	-0.344	-.415***	.311***
	Time management	14.25 (3.673)	16.70 (2.847)	14.19 (3.354)	12.13*** (4.218)	-0.505	-0.304	-.447***	.286***
Surface (mean 11.94)	Fear of failure	15.25 (3.660)	13.86 (3.607)	15.48 (3.582)	15.74 <sup>ns</sup> (3.790)	-0.672	-0.087	.079 <sup>ns</sup>	.006 <sup>ns</sup>
	Syllabus boundedness	12.67 (2.886)	10.95 (3.153)	12.79 (2.516)	13.87*** (3.273)	-0.079	0.123	.345***	-.215**
	Unrelated memorising	11.67 (2.791)	9.51 (2.534)	11.82 (2.576)	13.21*** (2.642)	-0.160	0.310	.382***	-.277***
	Lack of purpose	8.18 (3.110)	5.49 (1.283)	7.81 (2.398)	12.24*** (2.999)	0.883	0.300	.662***	-.199**

Table 2 ASSIST statistics: subscales arranged in order of decreasing mean score (<sup>†</sup>ANOVA F: ns=not significant, \*\*p<.01, \*\*\*p<.001; <sup>‡</sup>Pearson's r: ns=not significant, \*\*p<.01, \*\*\*p<.001; n=224: 37 low, 149 intermediate, 38 high)

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**Luke**

BPS-UKHE score 53 – low category  
Approach scores: deep 18.3, strategic 15.4, surface 8.5  
Degree outcome 67% (awarded 2:1)

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*Motivation and general experience of university:*

*It was to complete a degree, just another tick box [sfc], but I never realised the tick box it would be ... It's been amazing to be honest ... I've met so many people, university life has been great ... it's just the whole sort of atmosphere around you ... I think the first year was hard, just understanding what I had to do, the way things worked, that kind thing [str]. But as you move into the course it's more demanding ... the thought you have to put into it, how you have to analyse things [dp]. Things aren't black and white any more, things are shades of grey [dp].*

*On lectures and lecture boredom:*

*[Boredom] 'A lecture should leave you asking questions of what you've been hearing, been listening to, and then want to go and find out something else about it ... Some of the best lectures I've had here have been really inspirational [dp] ... on the flip side of that, I've been in lectures that have just been dull as ditch water [sfc] ... When you just sit there and you're thinking I could have read this in a book ... I don't need to know this [sfc], you know, we've been here for three years now ... I want to know the ideas behind it maybe, or what's caused that thinking, not what you've just read out the book [dp].*

*On assignments and assignment boredom:*

*Generally, I get a big box full of reading. Then I'll go through it highlighting the bits I think are good and then disregard everything else ... I tend to get as much as I can then try and tie the themes together so I can synthesise it [dp] ... structure the argument basically [dp] ... I like to make sure ... it's coherent, lots of elements are there [dp] ... then I'll start ... the introduction, the lit. review or start the methodology ... I can add bits when I need or take*

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**Hannah**

BPS-UKHE score 88 – high category  
Approach scores: deep 15.5, strategic 14.4, surface 15.5  
Degree outcome 49% (awarded 3)

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*Motivation and general experience of university:*

*I think learning itself, further development of the subject, and also I wanted to do teaching, so it was an obvious route [dp]. I enjoy learning ... I found it really hard this year and in the second year. Yeah ... definitely challenged ... Demanding, definitely ... you have to be dedicated ... I think the balance is quite hard to get right especially at first, but once you start getting it right, it just becomes routine, that you just get used to it [str].*

*On lectures and lecture boredom:*

*[Boredom] [W]hen lecturers have used a lot of PowerPoints and not really interacted with everyone ... it becomes a bit monotonous and my brain switches off [sfc]. I don't like ... the lights off ... that makes me more sleepy ... The speed of the content ... especially if it's new ... I get completely muddled ... the rest of the lecture becomes a blur ... I feel frustrated at myself because I feel like I should be concentrating but then I also feel, like, "Why am I here [sfc]?"*

*On assignments and assignment boredom:*

*With a specific focus I know what I need to do ... and I don't have to make a big decision. I know that sounds bad ... but I think if you're given so many options it becomes hard to decide [sfc] ... I normally look at the assignment brief ... I plan it out [stg] ... I don't do that as much as I probably could do to advantage, myself [stg] ... I think I don't allow myself enough time to probably look at it with fresh eyes and I think that's a downfall that I've come*

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*bits away just to balance things ... I've always had issues with punctuation and grammar ... everything's proof read ... normally two or three drafts ... [stg] I do look back on previous assignments to see what feedback I've had ... I just try to build on what I've done before [stg] ... Some of the feedback has been vague ... I'd rather have feedback sheets with written feedback [not] boxes coloured in but no feedback underneath [stg] ... I do most of my work between half-past eight and two in the morning generally[stg]. It's the only time I've got so it has to be productive ... you manage on hardly any sleep ... I'll try and get in a bit earlier or stay later and get to the library to pull up any resources I can get a hold of [stg]. [Boredom] It depends on the assignment. Generally, I really enjoy them, especially when I get into it [dp].*

*Intentionality and expectation:*

*Every piece of work is top quality, it has to be ... I don't do less than a two-one [2:1]. Say, for when I got fifty-five percent [55%], I was, like, "What's going on here? [stg]." I don't do less than a two-one [2:1], it's not in my stratosphere [stg].*

*to realise probably a bit too late [sfc] ... I revise it but I have a habit of doing a draft and not being happy with it and completely changing it [stg] ... I'm not very good with proof reading ... I think that's down to poor time management [sfc] ... maybe I should focus on the actual quality of it [stg] ... I think I get to a position where I know I need to do it, I haven't got much time, so I cram [sfc]. [On feedback] I read it as soon as I get it back [stg] ... I'm bad at focusing on the negative parts ... and not looking at what is positive about it [sfc] ... Sometimes with feedback ... I've felt that it's not helped progress ... I find having a tutorial helping progress more than the feedback [stg]. [Boredom] I find [them] interesting at first [dp] but then it becomes more of a task and I find it boring [sfc].*

*Intentionality and expectation:*

*I think I want to do well, but I think it's the confidence ... especially if I've had a previous assignment that's not had that much of a good mark [stg]... I think that sometimes it's fear of doing badly [sfc], but a lot of the time I'm working till the deadline and I'm constantly thinking "I've got to get this in [sfc]."*

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Table 3 Annotated interview transcripts from Luke and Hannah comparing boredom, motivation, approaches to learning and intentionality (dp=deep, stg=strategic, sfc=surface)

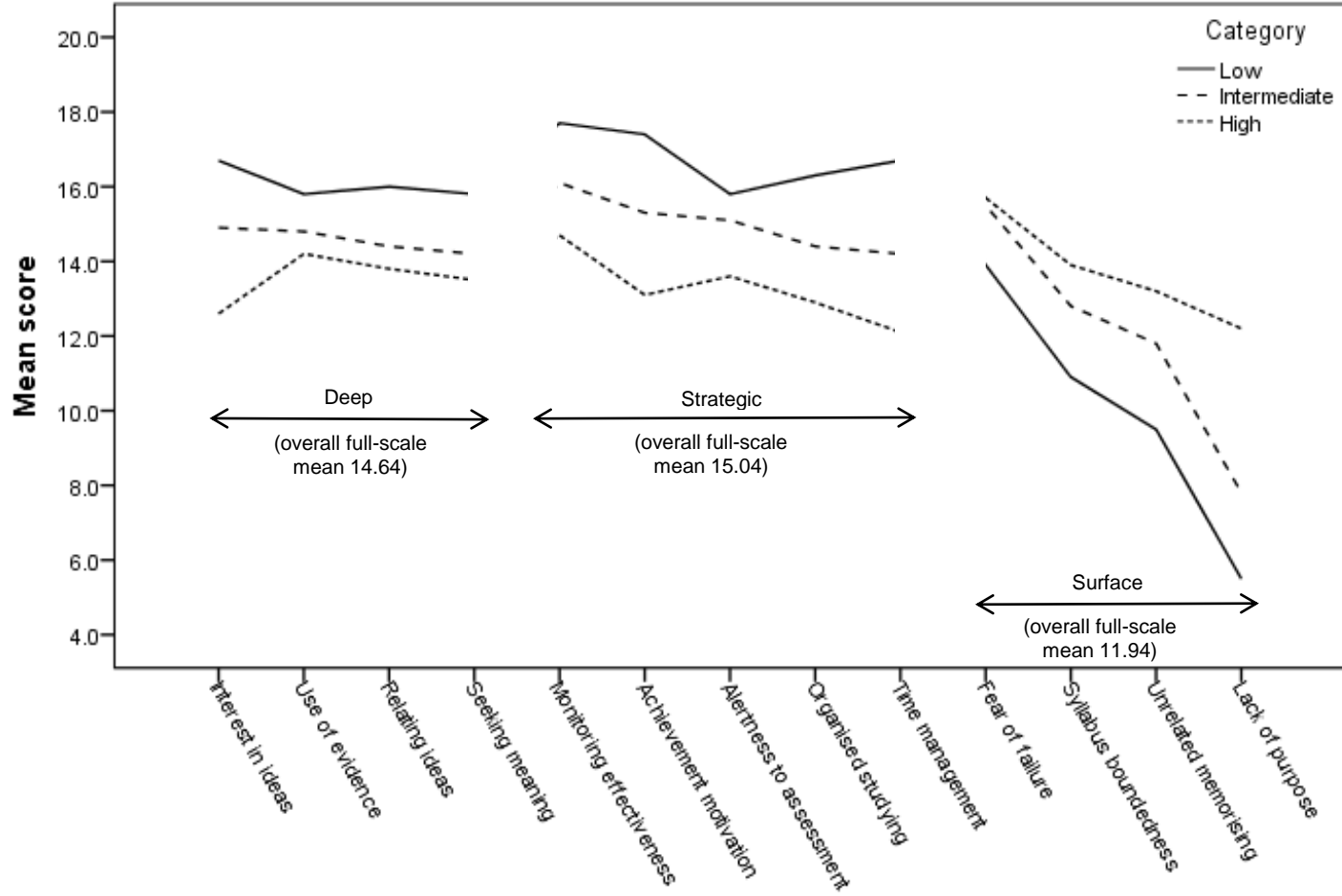


Figure 1 ASSIST subscale profiles split by boredom proneness category: arranged in order of decreasing mean score (n=224: 37 low, 149 intermediate, 38 high)

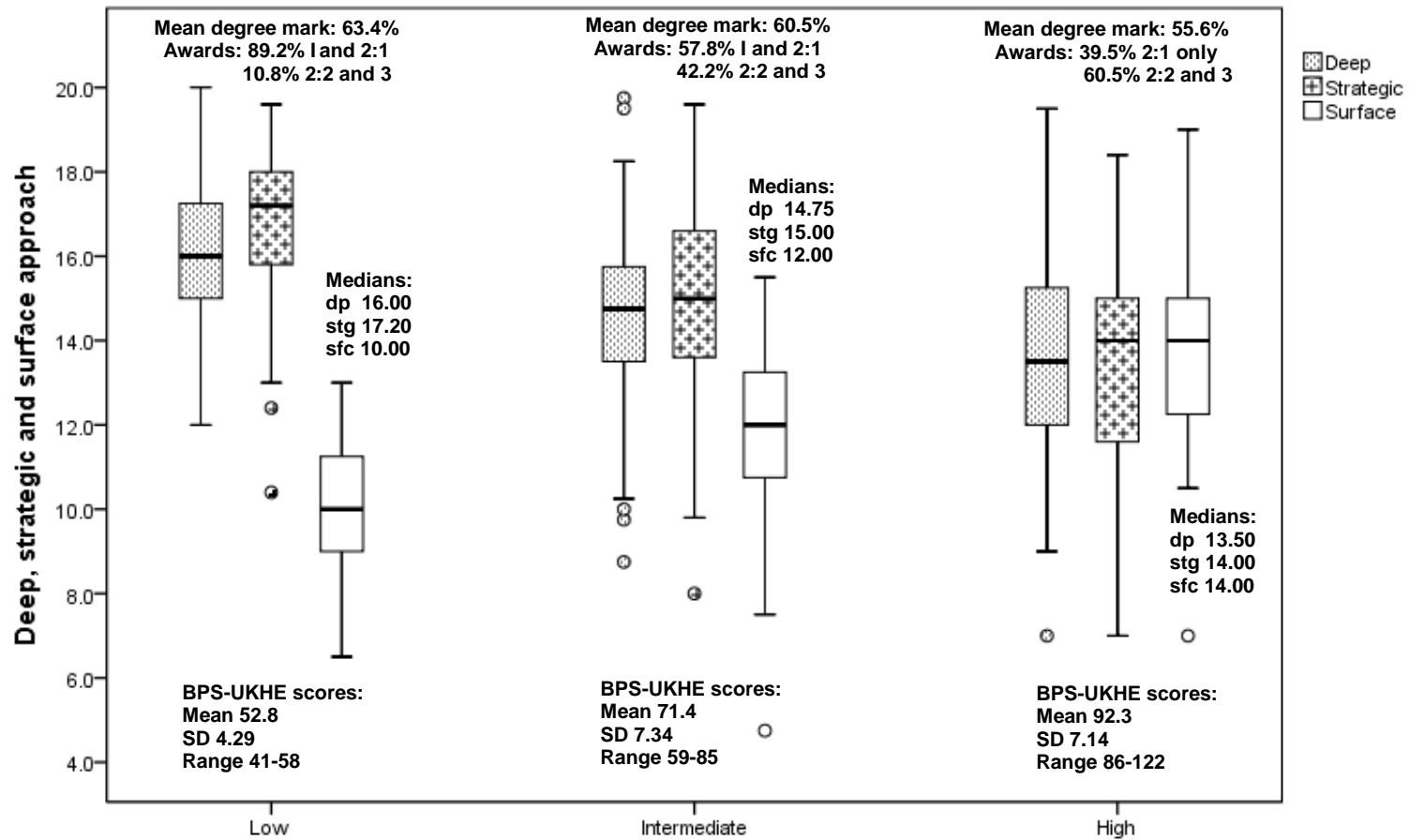


Figure 2 Approaches to learning and final degree outcome (mark and award) split by boredom proneness category (dp=deep, stg=strategic, sfc=surface; n=224: 37 low, 149 intermediate, 38 high)