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The impact of student attendance on assessment specific performance in sport degree programs

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1 **Title: The Impact of Student Attendance on Assessment Specific Performance in Sport**
2 **Degree Programs**

3

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30 **ABSTRACT**

31 This study aimed to assess the relationship between attendance and module assessment
32 performance across three Sport degree programs. Undergraduate students (n=256) from three
33 level 4 sport degrees (Sport Therapy (ST): 83; Sport and Exercise Sciences (SES): 80; Sports
34 Development and Management and Coaching (SDMC): 93) participated in this 12-week
35 prospective study. The assessments consisted of a practical for ST, exams and laboratory
36 reports for SES, and presentations and essays for SDMC. A significant correlation was
37 identified for attendance and overall performance across all degrees, although this was weak
38 ($r_s = 0.327$, $p < 0.001$). These findings suggest attendance positively correlates with assessment
39 performance. All assessment types significantly and positively correlated with assessment
40 performance. The study also reports that regardless of assessment type, attendance over a
41 threshold of over 75% led to significantly higher assessment performance compared to those
42 that did not achieve this threshold.

43 **Key words: higher education, pedagogy, evaluation, undergraduate**

44 INTRODUCTION

45 The landscape of Higher Education (HE) has continued to change over the last decade with
46 applications continuing to rise in the UK, despite the increase in tuition fees in 2012. The total
47 number of applicants to UK universities rose from 589,750 to 626,360 between the years 2013
48 and 2016 (UCAS, 2017). Brennan, Durazzi and Tanguy (2013) outline that HE aims to
49 disseminate and advance knowledge through teaching and learning. A factor that may
50 compromise this impact of HE is attendance, which has been implicated to hamper assessment
51 performance and overall student engagement (Gbadamosi, 2015). There has been a growing
52 view in HE as a result that student attendance is a concern (Massingham and Herrington, 2006).
53 It is thought that student attendance is central to student performance and is likely to increase
54 their chances of fulfilling their academic potential when they attend consistently (Durden and
55 Ellis, 1995). Furthermore, with the recent developments within the Teaching Excellence
56 Framework (TEF), lecturers, guided by institutional policy have a responsibility to ensure
57 engagement with modular activity and this will be criteria for assessment.

58

59 Attendance in lectures and seminars are considered important as they contribute to the
60 transition from surface learners (through secondary school and further education) to deep
61 learning in HE (Donnison and Perry-Edwards, 2012). It is claimed that through frequent
62 absenteeism students find it difficult to build the necessary skills and knowledge required to
63 succeed in their chosen area of study (Aden, Yahye and Dahir, 2013). Indeed, many UK HE
64 institutions implement attendance regulations that are typically outlined in the Module
65 Handbook or student contract. For example, these regulations may specify that two
66 consecutively missed sessions will result in a meeting to monitor progress. Furthermore, in
67 some cases students who fail to attend at least 75% of the sessions provided, regardless of grade
68 outcome, may be required to repeat the module in the following year. It is worth noting,
69 however, there is no consistency in UK HE institutions and attendance monitoring, but these
70 processes clearly have implications on student progression in their degree program.
71 Nonetheless, it also outlines the importance which universities now attach to attendance and is
72 perhaps guided by the findings of recent studies which have found student attendance impacts
73 upon student performance (Durden and Ellis, 1995; Stanca, 2006; Gottfried, 2010).

74

75 A study by Gottfried (2010) supported the link between attendance and achievement displaying
76 a positive and statistically significant regression (R^2 0.40, $p < 0.001$), though this was in
77 elementary and middle school students. Interestingly, whilst Durden and Ellis (1995) found

78 that higher attenders achieve better course grade averages, the effect was nonlinear suggesting
79 some high attenders do not necessarily achieve a high assessment grade, and vice versa. Their
80 evidence suggested that the academic achievement of students was only hampered for those
81 who missed in excess of four classes across the semester. The authors therefore suggested that
82 a ‘threshold effect’ was present meaning students could afford to miss up to four sessions
83 before their assessment performance were negatively affected. This perhaps justifies the
84 common use of attendance thresholds at HE institutions in the UK, including the 75% threshold
85 enforced at Edge Hill University, for example. A difficulty of quantifying the relationship of
86 attendance on assessment performance is that the type of assessment (i.e. exam, laboratory
87 report, essay and practical) is seldom considered, which plausibly can have an effect on the
88 overall relationship.

89
90 Stanca (2006) found that student attendance at both lectures and classes/seminars, which is
91 perhaps important in a HE context, had a significant impact on performance of an exam
92 assessment. Deane and Murphy (2013) progressed this by investigating whether undergraduate
93 student attendance impacted upon an overall assessment score, comprising results from a
94 multiple-choice exam, six short-answer questions, and an oral examination. They discovered
95 that attendance significantly impacted upon final grades, with distinction grades being awarded
96 in isolation to those who achieved attendance of at least 80%. Moreover, the majority (60%)
97 of students who failed to achieve a pass grade were those who attended less than 80% of the
98 sessions provided. This adds support to the ‘threshold effect’ proposed by Durden and Ellis
99 (1995), although Deane and Murphy (2013) sample comprised of medical students and little is
100 known as to whether this effect is present in sport students. Furthermore, whilst these results
101 indicate that attendance can impact the results of a final grade comprising of results from a
102 variety of assessments, there appeared to be no effect between the assessments investigated.
103 Despite no effect between the different types of assessment in the analysis by Deane and
104 Murphy (2013), a study by Furnham et al. (2007) did display students from British and
105 American universities preferred a multiple-choice exam compared to other types of assessment
106 (timed written paper, oral examination, continuous assessment, dissertation or group work).
107 This relationship was also observed in a similar study (Chamorro-Premuzic et al., 2005) within
108 a group of Australian undergraduates. Yet, students also reported that a multiple-choice exam
109 was not a true reflection of their ability.

110

111 One suggestion for a bias towards multiple-choice exam assessments is that students are only
112 required to adopt surface learning, with those who adopt a deep learning strategy being at a
113 disadvantage (Scouller, 1998). Furthermore, the previous experience of students exposure to
114 education in secondary school and further education is arguably largely indicative of a surface
115 learning approach, resulting in an under-development of deep learning; leading some to even
116 question if this was even initiated (Donnison and Perry-Edwards, 2012). Nevertheless, students
117 who adopt a deep learning strategy typically perform better in essay type assessments which
118 are perceived as assessing higher levels of cognitive processing and are integral to success in
119 the latter years of an undergraduate degree (Scouller, 1998). Furnham et al. (2008) revealed
120 that those students who preferred multiple-choice exam assessments were commonly surface
121 learners, whilst deep learners were in favour of essay style assessments such as final
122 dissertations. It is unclear how student attendance relates to this however, if at all. Some have
123 suggested that students are only interested in attending to ensure they obtain sufficient
124 information to assist them with their assessments and exam questions (Murphy, 1998; Browne
125 and Race, 2002; Exley and Dennick, 2004). Despite this, little is known in relation to how this
126 attendance relates to student performance across the different type of assessments performed,
127 particularly in Sport and Exercise Science.

128
129 Whilst factors such as self-efficacy have been examined in relation to its impacts on student
130 performance on sport degree programs (Lane, Hall and Lane , 2004), few have examined the
131 relationship between attendance and student assessment performance in these degree programs.
132 The aim of the current study is to, therefore, investigate the relationship of student attendance
133 on overall assessment performance across a combination first year sport degree modules
134 including Introduction to Anatomy and Physiology in ST, Introduction to Sport Policy and
135 Development in SDMC and lastly, Physiology and Nutrition in SES. A secondary aim of this
136 study is to investigate how overall attendance influences assessment performance of specific
137 assessments, namely: multiple-choice exam, essay, individual presentation, laboratory report,
138 and practical exam. Finally, the current study will look to understand whether there is a
139 ‘threshold effect’ in relation to overall attendance and sport students assessment performance,
140 in line with institutional policy.

141

142 **METHODS**

143 **Setting**

144 This was a prospective cohort study which was conducted within a UK based HE institution.
145 All students were enrolled students on a Sports based degree on a full-time basis for three years
146 at the time of the study data collection (2016). All degree types in used in the study were
147 Bachelor of Science degrees (BSc). This entailed attendance to 24 sessions across 12 weeks
148 and two examinations in each respective module. Each session entailed a two-hour lecture (1
149 session) and a one hour seminar/workshop (1 session). A hard copy of lecture slides is only
150 provided during the lecture and are not recorded or online until after the lecture in order to
151 encourage attendance. There is also a requirement of all the students on this program to attend
152 at least 75% of sessions. The second assessment was excluded from ST on the grounds it was
153 the same type of assessment in SES (i.e. exam).

154

155 **Participants**

156 Ethical approval for the present study was initially obtained from the University Research
157 Ethics Committee. Attendance and assessment performance data for ST, SES and SDMC level
158 4 students during the 2016-17 academic year was obtained from the Department. Students were
159 first year full-time undergraduates of a three year degree program. All personal and student
160 demographics were removed prior to statistical analysis for participant confidentiality. The
161 inclusion criteria of this present study required all students to complete the specific module
162 assessments, and were registered for the entire 12 weeks that the module was delivered. Any
163 students who did not meet these criteria were removed from the analysis.

164

165 **Data Collection**

166 Student attendance was calculated from a paper-based log-book that the students complete at
167 the commencement of each session. This was then transferred into an online log-system used
168 by the Department to monitor attendance. All data for grade performance was obtained
169 subsequent to publishing all module grades and was obtained from the Department. To identify
170 the assessment specific relationships with attendance, all degree programs included in the
171 present study were all different summative assessments. Specifically, these included a practical
172 assessment for ST, laboratory report and written examination for SES and presentations and
173 essays for SPMC. The overall performance from ST, SES and SDMC were also included for
174 analysis. The written examination for SES was primarily multiple-choice questions and a small
175 number of short answer questions and labelling diagrams.

176

177 **Statistical Analysis**

178 Assessment and attendance data were initially inputted into Microsoft Office Excel, where all
179 data were represented as a percentage on a 100-point scale. Descriptive statistics were used to
180 describe the student population, student attendance and academic performance (i.e. mean,
181 median, standard deviation, interquartile range). Normality was assessed using the Shapiro-Wilk
182 statistic, where the assumptions with normality were violated for attendance ($p = 0.045$) and
183 performance in assessments ($p < 0.001$). Therefore, Spearman's rank correlation was used to
184 identify the relationship (r_s) between overall attendance and overall assessment performance
185 across all degree programs, and the specific assessment types within the degree program. The
186 strength of the relationships were categorised as very weak (0.00-0.19), weak (0.20-0.39),
187 moderate (0.40-0.59), strong (0.60-0.79) and very strong (0.80-1.00) (Hopkins, 2000). To
188 determine whether the 75% attendance metric affects assessment performance, a Kruskal-
189 Wallis H test was used to identify differences between students with low attendance ($< 75\%$)
190 and high attendance ($\geq 75\%$). All assumptions associated with the aforementioned statistical
191 tests were not violated. Specifically, initial analysis identified the relationship was monotonic,
192 assessed by visual inspection of a scatterplot from the Spearman's rank correlation. For the
193 Kruskal-Wallis H test, the distributions of the attendance values were comparable for both
194 groups as identified by visual inspection of a boxplot. All statistical analyses were completed
195 using PASW Statistics Editor 22.0 for windows (SPSS Inc, Chicago, USA). Statistical
196 significance was set at $p \leq 0.05$. All data is reported as mean \pm standard deviation (SD) unless
197 otherwise stated (median and interquartile range [IQR]).

198

199 **RESULTS**

200 **Descriptive Analysis**

201 A total of 256 students from three level 4 sport degrees (ST: 83; SES: 80; SDMC: 93) that
202 completed all module assessments for the specific degree program were included for further
203 analysis in this study (Table 1). The study sample included low attenders ($< 75\%$ $n = 81$) and
204 high attenders ($\geq 75\%$; $n = 175$). Table 1 present the mean and SD of overall attendance and
205 performance with addition to assessment specific performance. Overall, the ST students
206 achieved the highest attendance and performance values compared to the other two modules
207 included in this study.

208

209 ***Table 1 near here***

210

211 **Correlation**

212 All correlations were significant and positive. For overall attendance and overall performance
213 across the degree programs, a significant correlation was identified ($r_s = 0.327$, $p < 0.001$; Figure
214 1). When this analysis was considered for the specific type of degree and assessment, the
215 relationship for ST degree program, overall attendance and practical performance was also
216 significantly correlated ($r_s = 0.277$, $p = 0.011$). For the SES degree program, overall attendance
217 was significantly correlated with laboratory reports ($r_s = 0.467$, $p < 0.001$) and exam
218 performance ($r_s = 0.508$, $p < 0.001$). For the SDMC Degree program, overall attendance was
219 significantly correlated with presentation performance ($r_s = 0.415$, $p < 0.001$) and essay
220 performance ($r_s = 0.441$, $p < 0.001$).

221
222 ***Figure 1 near here***
223

224 Attendance Based Performance

225 A significant difference was identified by the Kruskal-Wallis H test ($\chi^2(1) = 10.33$, $p = 0.001$)
226 between low attenders ($< 75\%$ $n = 81$; Median = 48, IQR 15%) and high attenders ($\geq 75\%$; $n =$
227 175; Median = 55, IQR 21%) was observed for overall module performance across all degree
228 types (Figure 2).

229
230 ***Figure 2 near here***
231

232 DISCUSSION

233 This study primarily aimed to investigate if student attendance correlates with assessment
234 performance within first year sport undergraduate degree programs. A second aim of this study
235 was to investigate the attendance-assessment relationship upon distinguishing between
236 different types of assessment. Lastly, the study also investigated the importance of an
237 attendance threshold of at least 75%, as this was the attendance policy adopted by the institution
238 used in the study. The primary finding was that attendance positively and significantly
239 correlates with assessment performance in all types of assessment, albeit with a weak
240 relationship and one that is non-linear. Upon separating for degree type and assessment type
241 however, attendance showed a greater positive relationship with assessment performance in
242 SES degree programs completing exam and laboratory reported assessments. This relationship
243 was stronger (moderate relationship in both assessments) compared to ST completing practical
244 assessments (weak relationship). Whereas, SDMC who completed individual presentations and
245 essays displayed similar correlations to SES, although they were marginally weaker. A unique

246 finding of this study was that attendance greater than 75% resulted in significantly higher
247 assessment performance compared to those who attended less than this threshold of sessions
248 across all Sport degree programs, akin to findings in other research investigating medical
249 undergraduate students (Durden and Ellis, 1995).

250

251 **Overall attendance – assessment performance relationship**

252 The relationship between attendance and overall assessment performance is weaker than some
253 (Aden et al., 2013; Deane and Murphy, 2013; Cohall and Skeete, 2012) but not all previous
254 research (Horton et al., 2012; Gatherer and Manning, 1998; Riggs and Blanco, 1994). Aden et
255 al. (2013) for instance, reported a strong positive correlation between attendance and
256 assessment performance ($r = 0.72$, $p < 0.001$) within a group of undergraduate Business and
257 Accounting students within a Somalian institution. In contrast, the present study revealed only
258 a weak relationship across all degree programs considered in this study. Likely factors to
259 explain the differences are the institutional location (Somalia vs. UK) and degree courses being
260 investigated (Business and Accounting vs. Sport Sciences). The findings from the University
261 of Dublin, which shares United Kingdom (UK) educational policy were more similar to the
262 current study, displaying attendance was positively and moderately correlated with assessment
263 performance ($r = 0.59$, $p < 0.001$) in a Medicine degree program (Deane and Murphy, 2013).
264 This investigation was only conducted over an eight-week module however, which may explain
265 why the correlation was stronger than the present study consisting of 12 weeks. In arguably the
266 most alike cohort available in the literature, weaker relationships were observed between
267 assessment performance and attendance ($r = 0.21$, $p < 0.02$) within a group of 120 second year
268 physiology degree students (Horton et al., 2012). To corroborate these findings, other studies
269 of a Science and/or Medicine specialism have also displayed similar weak correlations ($r =$
270 0.39) between attendance and assessment performance (Gatherer and Manning, 1998; Riggs
271 and Blanco, 1994). In combination, this suggests that attendance has a weaker influence on
272 assessment performance in the Sciences compared to other disciplines. These observations are
273 only reflective of one year of the three-year degree cycle therefore further research may
274 consider the impact of attendance on such a time frame to gain a better understanding of the
275 potential impact of attendance on assessment performance.

276

277 **Degree and assessment specific attendance – assessment performance relationships**

278 There is a paucity of research evaluating the relationship between attendance on different types
279 of assessment, and the present study's degree and assessment specific findings display
280 contrasting themes compared to the analysis on an overall level. This highlights the need for
281 future research to investigate the effects of attendance on individual assessments and degree
282 programs, therefore avoiding a holistic approach and the reducing the risk of missing
283 potentially important findings. Of note, the strongest correlation was observed for exam
284 performance in SES. The teaching pedagogy in first year undergraduate programs in SES is
285 aligned to a tendency of surface learning due to one of the assessments entailing the completion
286 of an exam. This is considered a valid approach to ease the transition from surface learning
287 during secondary school and further education to deep learning during second and third year
288 of undergraduate study (Donnison and Perry-Edwards, 2012). It is likely therefore the greater
289 amount of sessions a student attended, combined with the pedagogical approach of surface
290 learning, the greater this impacted on exam performance. A similar positive moderate
291 correlation was observed for laboratory report assessments in SES. For this module a workshop
292 for the laboratory report was part of the lecture each week. This likely explains both the high
293 attendance (~90%) and the correlation with attendance and assessment performance, displaying
294 that students considered these sessions valuable. Based on the positive moderate relationships
295 on attendance and performance in the Sport and Exercise module the present study data
296 supports the use of attendance monitoring, if the teaching pedagogy is aligned to the assessment
297 task.

298

299 Akin to the findings of SES, similar moderate relationships between attendance and assessment
300 performance were reported in SDMC entailing presentations and essays. The mean attendance
301 was lower by 37% compared to SES however, whilst mean grade in assessment was similar
302 (~2% difference). Nevertheless, considering degree programs of this nature are not dependent
303 on practical or clinical skills (like ST and SES, respectively) attendance may not have been
304 considered as important by the student. Rather, a large component of study is independent and
305 requires no formal attendance to sessions (i.e. independently directed reading). The institution
306 used in this study sets a requirement of around 152 hours independent study combined with
307 around 48 hours face to face teaching (this may vary depending on module). Based on this
308 premise, this may explain why grade average was maintained despite poor attendance in
309 SDMC. Nonetheless, encouraging high attendance is still warranted, as a positive moderate

310 correlation was observed for both presentation and essay performance within the higher
311 attenders.

312

313 The weakest attendance-assessment performance relationship observed was for ST and
314 practical assessments. This is surprising as high attendance to these sessions, in theory, should
315 allow them to gain the practical skills necessary to achieve a better grade in the practical
316 assessment. The lack of a strong correlation may be due to the generally high attendance in this
317 module as all students attended at least 75% of the sessions. A contributory reason for such
318 high attendance may be due to the practical nature of the assessment, therefore students found
319 it important to attend these sessions in order to gain the necessary skills for the assessment.
320 This is in agreement with previous research suggesting students are likely to attend more
321 frequently if they perceive the sessions are central to assessment preparation and passing the
322 course (Murphy, 1998; Browne and Race, 2002; Exley and Dennick, 2004). The high
323 attendance might also explain, in part, why no correlation was observed in this data as there
324 was a lack of variation in attendance rates (range 75 – 100%) compared to the other degree
325 programs (SES = 60 – 100%, ST = 10 – 100%). However, this module did also report
326 significantly greater assessment grades compared to the other degree programs with lower
327 attendance; therefore, suggesting attendance was important to the achievement of higher grades
328 in ST, despite a weak correlation. A benchmark of over 75% attendance therefore is still
329 worthwhile in this case. The added value of attending over this threshold is difficult to
330 determine however, although based on the weak positive correlation it may still have a small
331 impact on practical assessment performance.

332

333 **Institutional attendance threshold and assessment performance**

334 A unique finding of this study was that students who attended more than 75% of sessions
335 produced significantly greater performance compared to the students who attended less than
336 this threshold. This was evident for all modules in the present study and the difference between
337 median scores could distinguish between degree classifications (3 to 2:2 class honours). The
338 present study is not the first to find this theme, however, as Durden and Ellis (1995) suggested
339 consistent and high attendance improves assessment performance, despite allowing for up to
340 20% of sessions to be missed. In the hypothetical case that the present study findings were to
341 be consistent throughout the three-year degree cycle, attendance monitoring may be critical as

342 degree classifications in second and third year of undergraduate study ultimately determine the
343 overall classification. This may be of particular interest to academic institutions to provide the
344 best possible opportunities for assessment performance. These findings also support the use of
345 institutional attendance threshold policies in many UK HE institutions in order to heighten the
346 chances of progression onto the next stage of an academic degree, particularly in the SES.
347 However, raising attendance requirements over this threshold should be considered with
348 caution based upon the weak correlation displayed in ST where all students attended over 75%
349 of sessions; suggesting attendance over this threshold adds only a small effect to assessment
350 performance. Attendance over this threshold should not be discouraged however, as small
351 improvements in assessment would still be considered worthwhile; and the student learning
352 experience is determined by more than just assessment performance.

353

354 Whilst potential support for attendance thresholds were evidenced in this study, a caveat is that
355 this do not offer the cause as to how or why improved attendance increased assessment
356 performance; rather, correlations are offered. It could be argued, for example, due to the causal
357 variable of existing academic ability that the more academically able students have better
358 attendance and therefore performed better in the assessment. Equally, the current study did not
359 compare the assessment performance and attendance relationship in an environment where an
360 attendance threshold was not employed by the institution. Based on this factor, it is unknown
361 if the same findings would have been found if no attendance threshold was set by the institution.
362 These findings therefore suggest that whilst attendance could be an important factor for
363 assessment performance, it is unclear if institutions should employ attendance threshold
364 expectations with their learners.

365

366 **Limitations**

367 A consideration of this study is that only first year student data was analysed and therefore
368 should not lead to interpretation to second and third year students. Equally, attendance to
369 sessions does not always result in improvement in qualities such as students ability, motivation,
370 personality and opportunity to learn, which are also considered key to assessment performance
371 (Deane and Murphy, 2013). Additionally, the present study included different types of sports
372 related degree program, and therefore it cannot be discounted other variables such as age
373 (young vs. mature), income (low and high earning backgrounds) and gender (male and female)
374 could have plausibly affected assessment performance. Indeed, in physiology undergraduates

375 a greater impact of attendance on assessment performance was observed for females compared
376 to males (Cortright et al., 2011). In contrast, no clear relationship between age (mature vs.
377 young) and assessment performance has been observed in previous research (Hoskins et al.,
378 1997; Richardson et al., 1994). Future research could attempt to either evaluate the same sports
379 degree program over a number of academic years with similar cohorts of the same institution,
380 or even compare between different institutions. The results of the present study were not
381 separated for gender, as the SES degree programs considered in this study were male
382 dominated, and would have resulted in considerable unbalancing of the sample group.
383 Nevertheless, further research could consider the impacts of these factors on attendance and
384 assessment in sport related degree programs.

385

386 **Summary**

387 This is the first study to display attendance has an important role for assessment performance
388 in first year undergraduate students across SES degree programs and different assessment
389 types. Overall, the present study observations were akin to previous research in science
390 orientated degree programs (Horton et al., 2012), suggesting attendance has a weak effect on
391 assessment performance. Upon distinguishing between degree program and assessment type
392 however, high attendance is of greater importance for exam assessments displaying a moderate
393 correlation with attendance. Conversely, it seems of less importance for practical assessment
394 performance as weaker relationships were observed compared to the other assessment types in
395 this study; although this may have been due to the generally high attendance within this
396 module. Based on the present study findings, future research should distinguish between
397 different assessment types and avoid holistic approaches to investigating the attendance-
398 assessment relationship. Moreover, the use of attendance thresholds within institutional policy
399 are also supported, as over 75% attendance produced significantly greater assessment
400 performance, although direct comparisons with programs without an attendance threshold
401 requires future research to confirm this notion. Regardless of this outcome, attendance is worth
402 monitoring within an institution as it can aid identification of students who are struggling to
403 cope with learning and provide necessary support (Deane and Murphy, 2013). If the subsequent
404 intervention is appropriate, this could also enhance assessment performance, and potentially
405 improve students motivation and opportunity to learn. Lastly, further research is warranted to
406 see if these findings translate beyond the first year of undergraduate study, whilst other factors
407 such as age, gender and income could also be considered.

408

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Table and Figure Legends

Table 1: Asterisk (*) denotes significantly higher overall performance for Sports Therapy in comparison to Sport and Exercise Sciences and Sport Development and Management and Coaching.

Figure 1: Illustrates the relationship between overall attendance and grade (A) and degree specific performance for Sports Therapy (B), Sport and Exercise Science (C) and Sport Development and Management and Coaching (D).

Figure 2: Illustrates the differences in performance across all degree types in students with low attendance (<75%) and high attendance ($\geq 75\%$). The high attendance group achieved significantly higher performance (denoted by asterisk symbol [*]) in assessments compared to the low attendance group. Data is presented as median and IQR.