

# UNDERSTANDING STUDENT LEARNING GAIN: USING STUDENT-STAFF PARTNERSHIPS WITHIN HIGHER EDUCATION TO INFORM THE CONTINUOUS IMPROVEMENT PROCESS

MARTYN POLKINGHORNE

Business School and Centre for Fusion Learning Innovation and Excellence  
Bournemouth University,  
Poole, UK  
polkinghornem@bournemouth.ac.uk

GELAREH ROUSHAN

Centre for Fusion Learning Innovation and Excellence  
Bournemouth University  
Poole, UK  
groushan@bournemouth.ac.uk

JULIA TAYLOR

Doctoral College  
Bournemouth University  
Poole, UK  
jetaylor@bournemouth.ac.uk

**Abstract:** This paper considers a staff-student partnership approach to gather undergraduate business studies students' perceptions of the Learning Gain that they have achieved on a university module. This understanding can then be used to improve teaching for subsequent cohorts of students studying the same subject. The Learning Gain model used considers both the explicit knowledge gained by a student (Distance Travelled) and the tacit understanding (Journey Travelled). Data is collected at the end of the teaching, and the students are asked to reflect on their perceptions of how much they had learnt based upon specific question areas. The questions themselves are evolved from the Intended Learning Outcomes of the module being studied. Student responses highlighted areas of both successful, and less successful, learning for each participating student and also for each topic area. Differences in the learning being reported based upon both gender and project type were also identified. The model provides a unique perspective regarding how students view their own learning, from which a set of recommendations can be developed, to highlight key areas in which teaching needs to be reviewed to improve effectiveness. The lessons from this study demonstrate the value of staff-student partnerships as an integral part of the continuing improvement process within education.

**Keywords:** marketisation; assessment; feedback, learning gain; higher education; staff-student partnerships.

## 1 Introduction

The Higher Education sector has been subjected to an ongoing process of marketisation over several years (Bristow & Schneider, 2002; Molesworth *et al.*, 2010; Nedbalova *et al.*, 2014; Banwait, 2017; Bendixen & Jacobsen, 2017; Nixon *et al.*, 2018). As a result, students are now seeking assurances regarding the value for money of the course that they decide to study (Chapleo & O'Sullivan, 2017; Roohr *et al.*, 2017). Simultaneously, more students are rejecting the high levels of debt necessary to fund their studies (de Gayardon *et al.*, 2019), and instead are questioning why the cost of Higher Education is so significant (Callender & Jackson, 2008;

Temple *et al.*, 2016; Tomlinson & Kelly, 2018). Understanding the learning experience of students on a course or module, or in the context of marketisation, the students' perception of their learning, has now become an imperative (Polkinghorne *et al.*, 2017a).

Previous research undertaken by other researchers has demonstrated the value of students and staff working together in partnership (Bovill & Felten, 2016). Such partnerships represent academic development which is underpinned by inclusion, collaboration, and culture change (Mercer-Mapstone, 2020), thereby unlocking the power of the student perspective (Felten *et al.*, 2019) and enabling students to contribute to curricular or pedagogical change (Cook-Sather *et al.*, 2014).

A recent study undertaken by the authors (Polkinghorne *et al.*, 2021) has considered the development of a new model for evaluating the Learning Gain of students, and has tested it with a group of undergraduate students, considering how they viewed the change in their own learning with regard to the research methods elements of their final year project. This paper now takes an alternative perspective related to how students view the change in their learning in relation to the project management aspects of their research project. The paper proposes that using a *staff-student partnership* approach to liaise with students, and to understand their perceived Learning Gain from studying a course or module, will help the academic development of future teaching. This is therefore a move away from the traditional model of purely teacher led assessment of student improvement, and with student surveys being confined to asking questions regarding how the course or module has been taught. Instead, this approach is innovative because it encourages student self-reflection.

Rand Europe (McGrath *et al.*, 2015), and subsequently summarised by Polkinghorne *et al.* (2017b), reviewed the previously recognised measures for evaluating the Learning Gain of students. In England, a national learning project was established to trial the five most recognised approaches. Reports based upon these trials have been published by Jones-Devitt *et al.* (2019), and by Howsen (2019), which indicate many reservations about these approaches, and their appropriateness for determining the Learning Gain of students. The main concerns relate to finding a way of evaluating student learning gain which is considered to be academically robust, practical to deliver and cost effective to administer.

An improved understanding of what constitutes Learning Gain does now need to be developed by England's Office for Students, i.e., whether Learning Gain is about "accountability, measuring performance, assuring quality or for the enhancement of teaching, learning and the student experience" (Howson and Buckley, 2020, p.11). Existing methods for determining student Learning Gain also need further development to ensure that they are fit for purpose, for example to take into account the impact of contextual factors such as subject level differences (Jones-Devitt *et al.*, 2019; Howson, 2019).

The research study discussed in this paper considers the evaluation of student Learning Gain using a model proposed by Polkinghorne *et al.* (2017c), and detailed by Polkinghorne *et al.* (2021), which uses Distance Travelled (models, tools and theories), and Journey Travelled (practical experience and 'know-how') to create an understanding of a student's perceptions of their learning. This approach is thought to be well-suited for application in the context of *staff-student partnerships*, and this is the first study which considers using the model in this way.

Firstly, this paper will present the approach which has been undertaken. It will then explain the model for evaluating learning gain which has been applied in this study. The data collection and analysis undertaken will be discussed, and interpretation of the findings offered. Conclusions will be presented, followed by an identification of the limitations of this study, and finally the likely future direction of this research will be explained.

## 2 Research Approach and Method

This paper is reporting on research that has been undertaken in the period 2017 to 2020, using a 'survey' based primary data collection strategy, with a cross-sectional time horizon and a non-probability purposive critical sampling method. This mono-method research uses self-reflective surveys to collect ordinal (ranked) data from participants. Use of the model, and question design, are both expanded upon in the next section of this paper.

The possible question responses from each participant used a skewed Likert style ranking scale (Likert, 1932) to enable students to reflect upon their own perceptions. The ranking options were based upon descriptive linguistic labels from 'No Change (code = 0)', 'Minor Improvement (code = 1)', 'Moderate Improvement (code = 2)', 'Significant Improvement' (code = 3) to 'Exceptional Improvement' (code = 4), to enable participants to reflect upon how they perceived their own learning to have transformed from undertaking the university module or course being studied. The module in question was the final year (level 6) project on a business studies undergraduate degree course which was offered to students in three formats, these being:

1. Dissertation Project (DP) which is project investigating a research topic,
2. Reflective project (RP) which is a project considering the individual learning experiences of the student on their placement year working in industry,
3. Consultancy Project (CP) which is a live project investigating a real-world business issue for a company partner.

Whilst the Consultancy project can be individual or group based, the Dissertation Project, and the Reflective Project, are only offered on an individual basis. In each case, projects last for the full academic year and require a 12,000-word (or equivalent) report to be submitted at the end of Level 6. In the case of the Consultancy Projects, a presentation is also required at the conclusion of the work to ensure that results are disseminated to the relevant company partner.

It should be noted that the term 'Research Proposal' used in this paper only applies to Dissertation Projects but encompasses the alternative terms 'Learning Agreement' which applies to Reflective Projects, and 'Project Initiation Document' which applies to Consultancy Projects. This was made clear to participants.

This study was undertaken with ethical approval from Bournemouth University (Reference 9236). All participants volunteered to be involved in the study. The data was collected anonymously, and analysis was delayed until after the students' final marks had been published to avoid any conflict of interest.

## 3 Application of the Model

The model for evaluating student Learning Gain being applied in this study was first theorised by Polkinghorne *et al.* (2017c). The model builds on a previous study by Polkinghorne *et al.* (2017a) and takes into account definable Process, Output and Outcome Indicators, and maps questions developed from a module's Intended Learning Outcomes relating to both Distance Travelled, and Journey Travelled.

The Process Indicators upon which the model is founded relate to the collection of data, and the need to avoid national data from existing sources, and instead to collect data at the lowest possible level (from individual students). This approach is considered by the authors to best support diversity and inclusivity and will therefore also help to address attainment gaps for students from minority backgrounds. Using a self-reporting reflective survey approach, the model is cost efficient to administer and analyse, and enables both validity and comparability to be considered.

The Output Indicators are driven by Bloom’s (revised) Taxonomy of Higher Order Thinking Skills, as defined by Anderson and Krathwohl (2001), which is a representation of the thinking skills that should be applied at the various levels of Higher Education. In this study, only the uppermost four levels of the taxonomy are included in the model (creating, evaluating, analysing, and applying) as the participants in the test cohort were Level 6 – final year undergraduate degree students.

The model concentrates on academic development in terms of Distance Travelled and Journey Travelled. In this context, Polkinghorne *et al.* describe explicit knowledge as being “subject learning that can be codified and verbalised” and tacit knowledge as being “experience and practical application” (2019, p. 8).

The Outcome Indicators used in this model relate indirectly to longer-term benefits such as improvements in teaching and assessment, and the raising of standards, that may result from a better understanding of the perceived effectiveness of the learning achieved by students. As such, the model, and the understanding gained from using the model, can be used to support the continuous improvement of educational delivery and student engagement, and therefore has the potential to reinforce the *Managerialism* (economic return), *Marketisation* (competition between universities) and *Performativity* (universities responding to targets and indicators) agendas (Ball, 2003; Morley, 1997; Skelton, 2005). A recent study by Katsioudi and Kostareli (2021) recognises the importance of this relationship between Learning Gain achieved, student engagement and the ultimate satisfaction that they derive from their educational experience.

Taking into account the intended learning outcomes for the module, eight questions were developed. These questions included four that related to Distance Travelled and four related to Journey Travelled (Table 1). Using the model, the questions developed were mapped against the *Taxonomy of Higher Order Thinking Skills* to ensure that comprehensive coverage had been achieved.

**Table 1: Questions relating to Distance Travelled and Journey Travelled**

<b>Questions Relating to Distance Travelled</b>
<b>Q1</b> How much has your understanding of how to create an effective Research Proposal increased?
<b>Q2</b> How much has your understanding of designing ethically sound research projects increased?
<b>Q3</b> How much has your understanding of how to create an effective Gantt chart increased?
<b>Q4</b> How much has your understanding of the importance of a Research Proposal increased?
<b>Questions Relating to Journey Travelled</b>
<b>Q5</b> How much has your ability to be creative (developing new ideas) increased?
<b>Q6</b> How much has your ability to be innovative (developing new ways of doing things) increased?
<b>Q7</b> How much has your ability to manage a project using a Research Proposal increased?
<b>Q8</b> How much have your skills for structuring a research project report increased?

Authors’ own work

Taking a *staff-student partnership* approach, and asking students to consider how they perceived their own learning on the module being studied, using each of the questions presented as a trigger, students were asked to select the linguistic label that most reflected their own view of their academic development from a ordinal ranking list. Using this method, a response pattern was established for each participating student.

Each participating student was assigned an identifying code. This identifying code enabled differentiation between participants whilst also preserving the required level of anonymity. The identifying code for each participating student used a structure defined as being Project Type Identifier (CP = Consultancy Project; DP = Dissertation Project; RP = Reflective Project) – Gender Identifier (M = Male; F = Female), Numerical Identifier (integer in the range 1 to 2). Examples of this identifying code being used include code CP-F1 who is the first female consultancy project student, and in contrast, code RP-M2 who is the second male reflective project student.

Considering the ranking response options, it was anticipated that low-level Learning Gain responses (No Change and Minor Improvement) would indicate potential issues requiring urgent attention, medium-level Learning Gain responses (Moderate Improvement) would indicate situations that needed to be monitored, and high-level Learning Gain responses (Significant Improvement and Exceptional Improvement) would indicate good practice with the potential for wider dissemination.

#### 4 Data Analysis

A summary of student responses is detailed in Table 2. There was evidence that 42% of students (CP-M1, CP-M2, DP-F2, RP-M2 and RP-F2) reported high-levels of learning across the eight questions, with each student indicating either *Significant Improvement* or *Exceptional Improvement* in their perceived learning for at least 75% of the questions asked. This definition of a 'high-level' of learning will be used throughout this paper, with the frequency of respondents indicating *Significant Improvement* or *Exceptional Improvement* in their perceived learning being described as a percentage of the overall number of possible responses.

Across the responses, several students reported a mixed array of variation in their own learning, with 42% students (CP-F1, CP-F2, DP-F1, RP-M1 and RP-F1) providing high-level responses to at least 38% of questions indicating strong Learning Gain is perceived to have been achieved, whilst simultaneously reporting low-level responses to a further 38% of questions. Low levels of learning relate to responses that are *No Change* or *Minor Improvement* according to the participant's perception of their own Learning Gain. A further 16% of participants (DP-M1 and DP-M2) reported only low-levels of learning for at least 75% of question presented.

Considering individual questions, for Q1 (*How much has your understanding of how to create an effective Research Proposal increased?*), Q4 (*How much has your understanding of the importance of a Research Proposal increased?*) and Q5 (*How much has your ability to be creative (developing new ideas) increased?*), high levels of Learning Gain were reported by 83% of students. This result would imply that successful teaching has occurred from which perceived student learning has been achieved.

In contrast, for Q3 (*How much has your understanding of how to create an effective Gantt chart increased?*), only 33% of students reported a high-level of Learning Gain. This result would imply that teaching methods, and associated materials, relating to this area of the curriculum should be revisited, and that changes may be required.

**Table 2. Individual Student and Question Learning Gain Responses**

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	% High-Levels of Learning per Student
Student CP-M1	3	2	4	4	4	3	4	0	75%
Student CP-M2	4	3	4	4	4	4	4	4	100%
Student CP-F1	3	0	2	4	3	3	4	0	63%
Student CP-F2	3	3	1	3	3	2	2	3	63%
Student DP-M1	2	3	0	4	1	1	2	2	25%
Student DP-M2	3	1	0	1	1	0	2	3	25%
Student DP-F1	2	2	1	1	3	3	4	3	50%
Student DP-F2	3	3	3	3	3	3	4	4	100%
Student RP-M1	3	3	1	3	3	2	2	3	63%
Student RP-M2	3	3	3	3	3	3	3	4	100%
Student RP-F1	3	2	2	3	3	3	3	2	63%
Student RP-F2	3	3	2	3	4	3	3	3	88%
<b>% High-Levels of Learning per Question</b>	83%	58%	33%	83%	83%	67%	67%	67%	68%

Authors' own work

Once again considering only the high levels of learning according to each participant's own perception, the results for questions Q1 to Q4 can be combined to provide the mean frequency reported for Distance Travelled, and for questions Q5 to Q8 they can be combined to provide the mean frequency reported for Journey Travelled. By undertaking this approach (Table 3) it becomes possible to identify any underlying patterns or trends in learning dynamics.

**Table 3. Respondents Reporting High-Levels of Student Learning Gain**

	<i>Distance Travelled</i>	<i>Journey Travelled</i>	<i>Overall</i>
Student CP-M1	75%	75%	75%
Student CP-M2	100%	100%	100%
Student CP-F1	50%	75%	63%
Student CP-F2	75%	50%	63%
Student DP-M1	50%	0%	25%
Student DP-M2	25%	25%	25%
Student DP-F1	0%	100%	50%
Student DP-F2	100%	100%	100%
Student RP-M1	75%	50%	63%
Student RP-M2	100%	100%	100%
Student RP-F1	50%	75%	63%
Student RP-F2	75%	100%	88%

Authors' own work

In this context, reporting of a mean frequency Learning Gain of 75% and above was considered to be good, below 50% was considered to require attention, and between 50% and 75% was considered to require monitoring. Based upon this mean frequency data, students CP-M2 (100%) and DP-F2 (100%) reported the highest overall perceived Learning Gain, whilst students DP-M1 (25%) and DP-M2 (25%) reported the lowest perceived Learning Gain.

Considering just the high-levels of Learning Gain reported for each participant, firstly for Distance Travelled (Q1, Q2, Q3 and Q4) and then separately for Journey Travelled (Q5, Q6, Q7 and Q8), student CP-M2 reported an exceptionally high-level of Distance Travelled Learning Gain (100%), and Journey Travelled Learning Gain (100%), from which we can deduce that in their own opinion, this student's subject knowledge and practical experience have been advanced significantly. Student DP-M1 reported much higher levels of Distance Travelled Learning Gain (50%) compared to Journey Travelled Learning Gain (0%) from which we are able to speculate that their subject knowledge has advanced far more than their practical understanding. Equally, student DP-F1 reported much higher levels of Journey Travelled Learning Gain (100%), when compared to Distance Travelled Learning Gain (0%), from which we can surmise that their practical understanding has advanced far more than their subject knowledge.

Table 4 enables us to differentiate the data on the basis of identified gender. From this data it is clear that Females are reporting much stronger Learning Gain for Journey Travelled (83%), compared to the Males (58%), which indicates that more practically orientated skills have been learnt by the Females. Conversely, Males are reporting stronger Distance Travelled Learning Gain (71%), compared to Females (58%), which indicates that more theoretical knowledge has been learnt by the Males. The overall Learning Gain reported for Females (71%), is higher than the Learning Gain for Males (65%), but not by a very significant margin.

**Table 4. Combined Higher Categories of Student Learning Gain Reported by Gender**

	Questions Relating to Distance Travelled				Questions Relating to Journey Travelled				Mean Frequency for Gender
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	
<b>Female</b>	83%	50%	17%	83%	100%	83%	83%	67%	71%
Mean Frequency	58%				83%				
<b>Male</b>	83%	67%	50%	83%	67%	50%	50%	67%	65%
Mean Frequency	71%				58%				

Authors' own work

Even though the reported Journey Travelled Learning Gain is much higher for Females compared to Males, which is reflected in the magnitude of the difference in the reported higher levels of learning for Q5 (*How much has your ability to be creative increased?*), Q6 (*How much has your ability to be innovative increased?*) and Q7 (*How much has your ability to manage a project using a Research Proposal increased?*), interestingly, in the case of Q8 (*How much have your skills for structuring a research project report increased?*), Males have reported the same level of Learning Gain as the Females (66.7%).

Q1 (83%) and Q4 (83%) reported top levels of Learning Gain for both Males and for Females. Q7 (83%) was also a top result for Females, and comparatively low for Males (50%). It should be noted that the Q3 Female Learning Gain result (17%) was extraordinarily low, and was by far the lowest of all Learning Gain results obtained from this study indicating that for the question related to "*How much has your understanding of how to create an effective Gantt*

*chart increased?*", with only one exception, the Female group of participants did not consider that their learning had progressed enough to have been worthy of reporting.

Table 5 enables us to differentiate the data based on project type. From this data it is clear that students undertaking the Consultancy Project, and the Reflective Project, are reporting much stronger Learning Gain for Distance Travelled (75%) compared to those students following the Dissertation Project pathway (44%). This finding can be used to inform decision-making about the selection and resourcing of different project types, and the overall matching of individual students with projects.

**Table 5. Combined High-Level Student Learning Gain Reported by Project Type**

	Questions Relating to Distance Travelled				Questions Relating to Journey Travelled				Mean Frequency for Project Type
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	
<b>Consultancy Project</b>	100%	50%	50%	100%	100%	75%	75%	50%	75%
Mean Frequency	75%				75%				
<b>Dissertation Project</b>	50%	50%	25%	50%	50%	50%	50%	75%	50%
Mean Frequency	44%				56%				
<b>Reflective Project</b>	100%	75%	25%	100%	100%	75%	75%	75%	78%
Mean Frequency	75%				81%				

Authors' own work

When considering Journey Travelled, students following the Consultancy Project (75%) and Reflective Project (81%) both reported high-levels of Learning Gain, whilst students following the dissertation pathway once again reported a lower-level of Learning Gain (56%).

In the case of the Consultancy Projects, the highest reported Learning Gain is recorded for questions Q1 (100%), Q4 (100%) and Q5 (100%), and the lowest reported Learning Gain is for questions Q2 (50%), Q3 (50%) and Q8 (50%). For Dissertation Projects, the highest reported Learning Gain is also recorded for Q8 (75%), and the lowest reported Learning Gain is for Q3 (25%). Finally, in the case of the Reflective Projects, the highest reported Learning Gain is recorded for Q1, Q4 and Q5 (100%), and once again, the lowest reported Learning Gain is recorded for Q3 (25%).

Of particular note is the case of Q8 (*How much have your skills for structuring a research project report increased?*), which has the highest Learning Gain being reported by the students undertaking the Dissertation Project (75%), whilst simultaneously being one of the lowest Learning Gains being reported by the students undertaking the Consultancy Project (50%). Conversely, in the case of Q3 (*How much has your understanding of how to create an effective Gantt chart increased?*), whilst students on both the Dissertation and Reflective Projects reported the lowest Learning Gain for this question (25%), in the case of students following the Consultancy Project pathway, the Learning Gain being reported for this question (50%) was aligned with that of several other question responses.

The data collected suggests that overall Learning Gain for the Consultancy Project students (75%), and the Reflective Project students (78%), is much higher than for the Dissertation Students (50%). This is particularly relevant given the significant resource required to undertake intensive one to one supervision for Dissertation Projects, in comparison to the group supervision more commonly applied for the Consultancy Projects. Considering Learning Gain in terms of Distance Travelled, and Journey Travelled, the Consultancy Project students



have reported a good balance of both (75%), indicating that they consider that they have learnt both explicit knowledge and practical abilities. The exception to this is the case of Q8 (*How much have your skills for structuring a research project report increased?*) in which this group of students do not feel that their research proposal skills have improved nearly as much, which is not a view that either the Dissertation Project students, or the Reflective Project students, agree with.

Whilst the Reflective Project students have reported the exact same level of Distance Travelled Learning Gain (75%) as the Consultancy Project students, their reported Journey Travelled Learning Gain (81%) is even higher, and again this group of students is reporting they have learnt both explicit knowledge and practical abilities. Conversely, in the case of the Dissertation Project students, the reported Journey Travelled Learning Gain (56%), is higher than it is for Distance Travelled Learning Gain (44%), which implies that this group of students considers that their practical abilities have advanced more than their subject knowledge has, albeit that both are lower than expected.

Furthermore, it should be noted that whilst there are clear differences in the student responses to certain questions, the difference in reported Learning Gain between the Consultancy Project students, and the Reflective Project Students, is quite small (75% and 78% respectively) which indicates that although slightly different in the actual detail, both groups of students consider that they have received a similar overall level of educational development, and in both cases this is significantly more than the Learning Gain that has been reported by the Dissertation Project students (50%). Table 7 is a summary of the key issues raised.

## 5 Discussion

The research reported within this paper considers that, in the context of the increasing marketisation of Higher Education, there is an opportunity to take a *staff-student partnership* approach, so that student views regarding their own perceived learning on a course or module, can be captured in the form of their Learning Gain.

**Table 6: Summary of the Key Areas of Concern Raised by the Data Analysis**

Questions	Project Type			Gender	
	CP	DP	RP	F	M
Q1 - How much has your understanding of how to create an effective Research Proposal increased?		X			
Q2 - How much has your understanding of designing ethically sound research projects increased?	X	X		X	
Q3 - How much has your understanding of how to create an effective Gantt chart increased?	X	X	X	X	X
Q4 - How much has your understanding of the importance of a Research Proposal increased?		X			
Q5 - How much has your ability to be creative (developing new ideas) increased?		X			
Q6 - How much has your ability to be innovative (developing new ways of doing things) increased?		X			X
Q7 - How much has your ability to manage a project using a Research Proposal increased?		X			X
Q8 - How much have your skills for structuring a research project report increased?	X				

Authors' own work

The model for evaluating the Learning Gain of students used in this study is based upon an alternative perspective first proposed by Polkinghorne *et al.* (2017c). The model considers both the Distance Travelled by a student (explicit knowledge that can be codified) and also the Journey Travelled (tacit understanding in the form of skills and experience). A test cohort of Level 6 (final year undergraduate degree) students were assessed using the model during their project module. Students were asked to self-report their perceived learning connected with certain key aspects of the module, i.e., project management orientated learning. Data was collected using an online data collection tool based upon eight specific questions bespoke to the module being studied. Four of these questions related to Distance Travelled and the other four questions related to Journey Travelled.

Analysis of the data collected by this study identified differences in student learning against individual questions, and more importantly, against questions grouped as relating to Distance Travelled and Journey Travelled. Questions reporting high levels of perceived learning indicated successful teaching, and good practice that should be identified and disseminated. Questions reporting low-levels of perceived learning indicate potential problem areas (Table 6), which presents an opportunity for rethinking the delivery and support being provided to students, so that a more effective educational experience can be generated. Students reporting high or low Distance Travelled, whilst simultaneously reporting the converse for Journey Travelled, are thought to be indicating a natural disposition towards either explicit knowledge (theoretical) or tacit understanding (practical) respectively.

**Table 7: Recommendations for Integration into the Continuous Improvement Process**

<b>Project Type</b>	<b>Recommendations for Academic Team Consideration</b>
<b>Consultancy Project</b>	<ul style="list-style-type: none"> <li>• Revise support regarding ethics.</li> <li>• Revise support for Gantt chart development.</li> <li>• Revise support for structuring a research project.</li> </ul>
<b>Dissertation Project</b>	<ul style="list-style-type: none"> <li>• Revise support for creating and understanding Research Proposals.</li> <li>• Revise support regarding ethics.</li> <li>• Revise support for Gantt chart development.</li> <li>• Revise support for students to be creative and innovative.</li> <li>• Revise support for creating a research proposal.</li> <li>• Revise support for how to manage a research project.</li> </ul>
<b>Reflective Project</b>	<ul style="list-style-type: none"> <li>• Revise support for Gantt chart development.</li> </ul>
<b>Females</b>	<ul style="list-style-type: none"> <li>• Revise support regarding ethics.</li> <li>• Revise support for Gantt chart development.</li> <li>• Revise support for structuring a research project.</li> </ul>
<b>Males</b>	<ul style="list-style-type: none"> <li>• Revise support for Gantt chart development.</li> <li>• Revise support for students to be creative and innovative.</li> <li>• Revise support for how to manage a research project.</li> </ul>

Authors' own work

The variations in learning presented were translated into a set of recommendations (Table 7), for integration into the continuous improvement process, so that teaching the following year could be revised in priority areas, and appropriate scaffolding put in place to create a supportive learning environment. Undertaking a similar data collection exercise, with the next cohort of students studying this same module, will provide an immediate indication of how successful any such changes have been. Undertaking this exercise each year for a period of time, will provide valuable trend data from which the correlation between changes in teaching

executed can be related to the reported learning from the students. This approach has the potential to provide a simple, and yet powerful, understanding of the learning patterns of the students on the taught module. Without the students' involvement, and their personal reflection on their own perceived learning, this approach would not have been possible. The important role of the *staff-student partnership* in terms of informing the continuous improvement process within Higher Education has therefore been established.

## 6 Conclusion

The evidence from this Learning Gain study demonstrates that taking a *staff-student partnership* approach has enabled the academic team to understand the learning journey of the participating students. This new understanding will influence actions subsequently taken as part of the continuous improvement process, and in terms of institutional competitiveness, whether in respect of the managerialism, marketisation or performativity agendas, the data collected will ensure that strategic decision-making is informed. The lessons learnt from this study are therefore positive, and the authors consider that the potential benefits of using the Learning Gain model would be equally applicable to other university level education systems.

## 7 Limitations and Future Research

This paper has reported on a study involving a small cohort of business studies students studying a project module at Level 6 (final year undergraduate degree). The size of the cohort was restricted when the ethical approval was granted, and all students included had to be supervised by the same academic. Although this condition removed the variables of supervisor style, ability and experience, it also ensured that the cohort size was too small to be able to generalise from the research outcomes.

Data collected using a *staff-student partnership* approach has been demonstrated to provide useful insights into the perceived learning of the participating students. The model for evaluating student Learning Gain now needs application to larger groups of students to fully understand its potential impact. Such further testing could include students studying at different levels in Higher Education, and within a variety of discipline areas. A subsequent study will investigate these wider issues and will also consider if the *staff-student partnership* approach remains valid, when applied to larger groups of students. Furthermore, demographic data is required for the participants, to enable consideration of Learning Gain variations in the context of minority group representation.

## References

Anderson, L., & Krathwohl, D. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. New York: Longmans.

Ball, S. (2003). The teacher's soul and the terrors of performativity. *Journal of Education Policy*, 18(2), 215-228. doi: 10.1080/0268093022000043065

Banwait, K. (2017). *The student as customer: A study of the intensified marketisation of Higher Education in England*. PhD Thesis. Deby: University of Derby.

Bendixen, C., & Jacobsen, J. (2017). Nullifying quality: The marketisation of Higher Education. *Quality in Higher Education*, 23(1), 20-34. doi: <https://doi.org/10.1080/13538322.2017.1294406>

Bristow, D., & Schneider, K. (2002). Collegiate student orientation scale (CSOS): Application of the marketing concept to Higher Education. *Marketing for Higher Education*, 12(2), 15-34. doi: 10.1300/J050v12n02\_02

- Bovill, C., & Felten, P. (2016). Cultivating student–staff partnerships through research and practice, *International Journal for Academic Development*, 21(1), 1-3. doi:10.1080/1360144X.2016.1124965
- Callender, C., & Jackson, J. (2008). Does the fear of debt constrain choice of university and subject of study? *Studies in Higher Education*, 33(4), 405–429. doi:10.1080/03075070802211802
- Chapleo, C., & O'Sullivan, H. (2017). Contemporary thought in Higher Education marketing. *Journal of Marketing for Higher Education*, 27(2), 159-161. doi:10.1080/08841241.2017.1406255.
- Cook-Sather, A., Bovill, C., & Felten, P. (2014). *Engaging students as partners in learning and teaching: A guide for faculty*. New Jersey: Jossey-Bass.
- de Gayardon, A., Callender, C., & Green, F. (2019). The determinants of student loan take-up in England. *Higher Education*, 78, 963-983. doi.org/10.1007/s10734-019-00381-9
- Felten, P., Abbot, S., Kirkwood, J., Long, A., Lubicz-Nawrocka, T., Mercer-Mapstone, L., & Verwoord, R. (2019). Reimagining the place of students in academic development. *International Journal for Academic Development*, 29(2), 192-203. doi:10.1080/1360144X.2019.1594235
- Howson, C. (2019). *Final Evaluation of the Office for Students Learning Gain Pilot Projects*. Report to the Office for Students. London: King's College.
- Howson C., & Buckley, A. (2020). Quantifying learning: Measuring student outcomes in Higher Education in England. *Politics and Governance*, 8(2), 6–14. doi:10.17645/pag.v8i2.2564
- Jones-Devitt, S., Pickering, N., Austen, L., Donnelly, A., Adesola, J., & Weston, A. (2019). *Evaluation of the national mixed methods learning gain project (NMMLGP) and student perceptions of learning gain*. Report to the Office for Students. Sheffield: Sheffield Hallam University.
- Katsioudi, G., & Kostareli, E. (2021). A sandwich-model experiment with personal response systems on epigenetics: Insights into learning gain, student engagement and satisfaction. *FEBS open bio*, 11(5), 1282-1298. doi: <https://doi.org/10.1002/2211-5463.13135>
- Likert, R. (1932). A technique for the measurement of attitudes. *Archives of Psychology*, 22(140), 55.
- McGrath, C., Guerin, B., Harte, E., Frearson, M., & Manville, C. (2015). *HEFCE report - Learning Gain in Higher Education*. Santa Monica, US: RAND Corporation.
- Mercer-Mapstone, L. (2020). The student–staff partnership movement: Striving for inclusion as we push sectorial change, *International Journal for Academic Development*, 25(2), 121-133. doi:10.1080/1360144X.2019.1631171
- Morley, L. (1997). Change and equity in Higher Education. *British Journal of Sociology of Education*, 18(2), 231-242. doi: 10.1080/0142569970180206
- Molesworth, M., Scullion, R., & Nixon, E. (2010). *The marketisation of Higher Education and the student as consumer*. London: Routledge.

Nedbalova, E., Greenacre, L., & Schulz, J. (2014). UK Higher Education viewed through the marketization and marketing lenses. *Marketing for Higher Education*, 24(2), 178-195. doi: 10.1080/08841241.2014.973472

Nixon, E., Scullion, R., & Hearn, R. (2018). Her majesty the student: Marketised Higher Education and the narcissistic (dis) satisfactions of the student-consumer. *Studies in Higher Education*, 43(6), 927-943. doi: <https://doi.org/10.1080/03075079.2016.1196353>

Polkinghorne, M., Roushan, G., & Taylor, J. (2017a). Considering the marketing of Higher Education: The role of student learning gain as a potential indicator of teaching quality. *Marketing for Higher Education*, 27(2), 213-232, doi: 10.1080/08841241.2017.1380741

Polkinghorne, M., Roushan, G., & Taylor, J. (2017b). *Assessing student learning: A comparison of existing methods for evaluating the learning gain of students*. Poole: Bournemouth University.

Polkinghorne, M., Roushan, G., & Taylor, J. (2017c, May 11). *Evaluating student learning gain: An alternative perspective* [Poster Presentation]. Higher Education Academy (HEA) Surveys Conference – Understanding and Enhancing the Student Experience, Manchester, UK.

Polkinghorne, M., O'Sullivan, H., Taylor, J., & Roushan, G. (2019). An innovative framework for Higher Education to evaluate learning gain: A case study based upon the discipline of marketing. *Studies in Higher Education*. Advance online publication. doi: 10.1080/03075079.2019.1703132

Polkinghorne, M., Roushan, G., & Taylor, J. (2020). Seeking an educational utopia: An alternative model for evaluating student learning gain. *Further and Higher Education*. 45(6), 857-869. doi.org/10.1080/0309877X.2020.1826035

Roohr, K., Liu, H., & Liu, O. (2017). Investigating student learning gains in college: A longitudinal study. *Studies in Higher Education*, 42(12), 2284-2300. doi:10.1080/03075079.2016.1143925

Skelton, A. (2005). *Understanding teaching excellence in Higher Education: Towards a critical approach*. London: Routledge.

Temple, P., Callender, C., Grove, L., & Kersh, N. (2016). Managing the student experience in English Higher Education: Differing responses to market pressures. *London Review of Education*, 14(1), 33-44. doi:10.18546/LRE.14.1.05

Tomlinson, M., & Kelly, P. (2018). A prize for a price? HE marketization and the question of value. *Theory and Research in Education*, 16(3), 351–367. doi:10.1177/1477878518810915