

## ENHANCING STUDENTS LEARNING EXPERIENCE VIA IN-CLASS FORMATIVE ASSESSMENTS: A BUSINESS STUDIES UK HIGHER EDUCATION EXAMPLE

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**ABSTRACT:** *This research is focused on investigating the application of curricula design theories as means to improve the delivery of teaching materials for Business Management subjects in Higher Education programmes. Analysis in educational institutions of Business Management curricula delivery shows an emphasis on the relationship between the teaching materials delivered and employability skills embraced by students required for further progression in academia or industry. This research has shown that students have the tendency to prioritise summative assessments by procrastinating, neglecting and lacking engagement and participation in class which will then negatively reflect upon students' motivation and achievement levels. Therefore, this research seeks to explore the implications deriving from increasing the in-class formative assessments as part of curricula design in regards to enhancing students' engagement, commitment and motivation. The authors believe that strengthening the formative assessments together with summative assessments will contribute to a better learning experience, thus equip learners with adequate knowledge to assure smooth progression to more challenging academic programmes and/or industry related roles. The methodology of this research includes qualitative grounds, applying observations and focus groups as research techniques. Moreover, the data collected discusses and analyses the findings embracing an interpretivism approach and elements of reliability and validity are also discussed.*

**KEYWORDS:** Business Management Curricula Design; Formative Assessments; Student Engagement; Learning Experience; Transferable Skills; Employability Skills.

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### INTRODUCTION

This action research project enhances aspects of the curricula design and curricula delivery. It investigated the implications of applying formative assessments in order to increase the students pass rate through increasing motivation and engagement of learners. It is widely viewed that majority of students have the propensity to work on summative assessments when deadline approaches, thus not being systematic and consistent in skills development.

Therefore, this research intended to employ action research, with the next cohort of students for this unit, introducing the application of formative tests as a technique that would enhance students' learning experience and improve transferable skills, time management and hence increase employability opportunities. The targeted behaviour being that the action research cohort of students obtain a first time pass rate with no referrals. The focus of research is the higher education business studies subject of Managing Communication, Knowledge and Information (MCKI). Previously the students' performance had been extremely poor with all students failing to achieve passes even on their second attempts.

The following sections of this paper are constructed by providing a section dedicated to methodology with emphasis on data collection and the methodology applied in this research. Following that a literature review discusses the aspects of action research, formative assessments, curricula design and employability. Afterwards, the action research is discussed and findings critiqued to offer insights into the validity and applicability of this research to other educational settings.

## RESEARCH CONTEXT AND METHODOLOGY

This action research intends to investigate the application of increased formative assessment such as in class short tests and whether that approach increases student pass rate and alongside improves motivation and student engagement, thus forming the main hypothesis of this investigation. The selected setting for the research is a cohort of 19 students that are in their third semester of a two year Higher National Diploma- Business Studies at OLC Europe Ltd, the case study organisation is a private college in Manchester, UK. The students were told prior to the start of the study there would be formative assessments in class each week. Students were also informed that formative assessments do not contribute to the overall grades the students would achieve for this unit while the summative assessment was given in full contribution to the students' grades.

Action research in educational settings is discussed as an effective method by Lichtman (2012) and Schostak (2002) and has been used by educational psychologist for many years. For example, observing social interaction and behavioural changes in an educational setting over several weeks of purposeful tutor interventions may identify changes in cognitive behaviour of students, Piaget (1968). According to Neary (2003), Eddy et al. (2015), Hardy *et al.* (2014), Imrie *et al.* (2014) and Rodrigues and Oliveira (2014) methodologies within an educational action research project might include one or a combination from table 1.

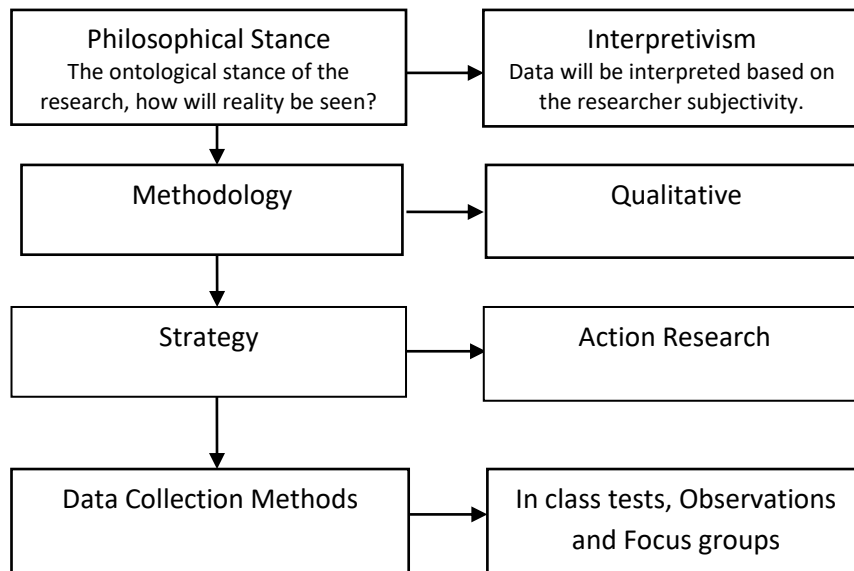
### Action Research Data Collection Methods

The observation method allowed assessment of students' reaction in terms of performance, engagement and motivation. While focus groups provided the opportunity of finding out students' perceptions on the new formative assessment techniques introduced and gave educators the chance to receive any constructive feedback that could be incorporated for further improvement. A combination of those two methods deepened the evaluation and analysis of data collected by investigating if the information and perceptions from observations and focus groups provide a unified understanding.

**Table 1: Action research data collection methods used in this study**

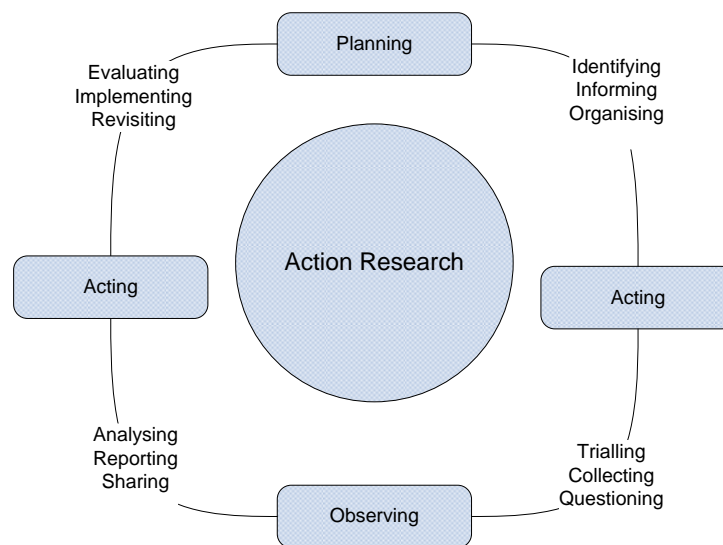
Action Research Data Collection Methods Available Hardy <i>et al.</i> (2014), Imrie <i>et al.</i> (2014) and Rodrigues and Oliveira (2014)	Methods used in the research
Observations	✓
Video and audio recording	X
Photographs	X
Focus groups	✓
Unit Questionnaire Forms	✓
Keeping field notes	✓
Apply structured or semi-structured interviews	✓

During the research period field notes obtained during class observations and any student responses or reactions to the increase of formative assessment was recorded. Those students responded to a short evaluation questionnaires and responses that were noted as significantly different to previous class responses were further investigated with follow up interviews with the student class representatives. Likewise, the methodology of this research is illustrated in figure 1 showing that action research is at the heart of this study.



**Figure 1- Methodological framework of this action research, Source: Saunders and Philip (2014)**

This action research used in class observations and tests were administered each week to (i) assess students' reaction to the new formative assessment regime as well as to (ii) assess students understanding of the curriculum topic and (iii) to observe changes in learning behaviour. These indicators were selected by the business studies programme tutor group from their experience. The rationale of selecting an observation method is that allows the research to monitor samples' reactions to new activities, communication, participation and behaviour (Schmuck, 1997). Importantly, it aims to establish new insights within the teaching and learning practices in relation to participation, interaction, communication and other student activities. Also, it provides opportunities to investigate issues noticed using other methods, which in this action research case is focus groups. Accordingly to Cohen et al. (2000) and Eddy et al. (2015) observation aids the gathering of information on how an alternation or modification of teaching and learning practices has been applied separately from learners' perception. This is another justification for selecting action research since introducing the application of weekly tests is the planned intervention that will lead to a change in behaviour that will be analysed and further interventions will be modified to enhance student learning. That cycle of acting on the observations is shown in figure 2, the action research framework.



**Figure 2- Action Research Framework, Source: Adapted from Kemmis and McTaggart (1990)**

Likewise, this action research will aim to investigate the impact that an increase of formative assessment has on improving student engagement and as a result increases the overall pass rate. Furthermore, action research is a method that allows the researcher to collect information that might be sensitive for learners who otherwise are not willing to share in other methods such as focus groups (Cohen et al. 2000; Eddy et al. 2015).

According to Cohen et al. (2000) limitation of this method is the inability to observe what participants think, therefore, to overcome this challenge the focus groups will be utilised as an additional supportive method. Likewise, a focus group template that will be asking five questions to collect information from students and have a better understanding of their perception has been developed. The research design considers that in order to eliminate any bias or interference from the action research tutor, two colleagues would facilitate the focus group activity so students would not feel pressurised while expressing their opinions.

## LITERATURE REVIEW

### Types of Assessments in Higher Education Curriculum Design

It is widely accepted that assessments are employed in order to support learning and evaluate students' engagement and understanding of the knowledge delivered. Such evaluations are widely known as formative and summative assessments. According to Black and Wiliam (2003) the term formative evaluation was initially introduced by Micheal Scrive in 1967 in regards to the curriculum and teaching aspects. However, Black and Wiliam (2003) added that Bloom (1971) utilised the term in referring to the evaluation aspects as it is used nowadays. Bloom (1971) defined the summative assessments as test or final work assigned at the end of the unit or module aiming to provide a final grade for the learner or assessing the curriculum's efficacy. Authors differentiated the formative assessment as a technique that involves students, teachers and curriculum designers which takes place throughout the unit

delivery and supports students' learning process. Having said this, formative assessment is considered as a method that contributes continuously to the foundation of student knowledge and development. However, it is commonly known that motivation and engagement of student might lack during the term for several reasons such as student commitment, punctuality, curricula design, intensity of the programmes and for particular subjects complexity of the materials delivered (Burke, 2010). Therefore, emphasising the application of formative assessment is considered as an important teaching technique in enhancing the results of summative assessment (Tuttle, 2009). Consequently, this impacts the overall passing rate as the student learning process has been developed in progression with the materials delivered and guidance to overcome learners' challenges is provided step by step. Likewise, this research intends to increase the number of in class formative assessments such as multiple choice tests in order to gain a better understanding of learners' engagement and learning needs. This technique also helps to reflect on the teaching practices and adjust where needed in an iterative manner as indicated by figure 2 in the action research framework. Furthermore, this technique of formative assessment is introduced after a consideration of Part B, of UK Quality Code for Higher Education that focuses on Assuring and enhancing academic quality through programme monitoring and review and learning and teaching in Chapter B8 and Chapter B3 respectively, (QAA, 2016).

### **Significance and Implications of Formative Assessment**

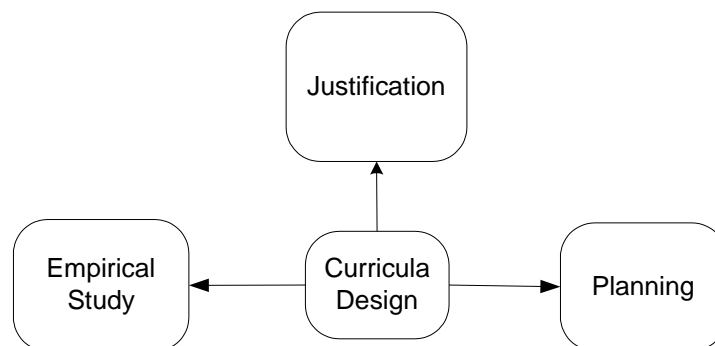
The formative assessment requires a continued focus on learning objectives and measure students progression towards the objectives stated. Boyle and Charles (2016) define formative assessment as an approach that "*through its structural philosophy of evidence elicitation, analysis and action supplies the strategy to make teaching effective and learning deep and sustained*". Authors, Boyle and Charles (2016), explain that formative assessments encourage teachers to closely observe students thinking and adapt their planning accordingly. Consequently, such assessments are believed to enhance students' performance and accomplishments. Additionally, formative assessments contribute in minimising or eliminating the gap between learners existing knowledge and the aimed objectives. This will shape students abilities in becoming goal oriented rather than performance oriented. In other words, students will train their ability to learn continuously, therefore meeting the learning objectives independently and consistently, rather than being assessed for performance purposes only. One of the advantages relies upon the ability of this method to enhance students learning without compromising their confidence. Similarly, studies have shown that this method allows students to notice the improvement of their intelligence over the time as a result of feedback (Vispoel and Austin, 1995; Lopez-Pastor and Sicilia-Camacho, 2017). These intellectual improvements are reflected through a better self efficiency and an increase interest on learning as a result of being challenged continuously. Furthermore, students become more analytical, plan better and improve their learning skills (Black and William, 1998a).

A considerable amount of the group of students in the case study class have the tendency to work on the assignments when their deadline approaches thus not allowing enough time to conduct appropriate research and consider a range of sources or different academic perspectives within the area or topic discussed. Also, the quality of work has not been at the expected level and there has been anecdotal evidence from tutors that the majority of students have worked on the assignment only to meet an academic requirement. That concern furthermore includes whether or not the students are able to embed an extensive knowledge

of the delivered MCKI subject and through individual research equip them with the adequate skills to improve their employability chances. For Business studies, wisely designing and implementing a curriculum is of a high significance when considering its implications within a social context in terms of skill acquisitions, society, industry, economy, nation progression and prosperity (Gardner and Gardner, 2012; Black and Wiliam, 1998). Curricula design is a considerable extensive area of study and has generated several issues, arguments, opinions and researches; however the main elements important for this action research will be discussed in the following section.

### Curricula Design Theory and the Role of Assessment

The curricula design in Business and Management topics has continuously gained prominence because it provides the foundation for investigating the link between academia and employment and judging the effectiveness of this bond. Such investigation is able to signal any changes occurring within the industry and that should be reflected in the curricula design. Assessment methods and assessment of students learning should therefore be able to represent the real world of work thus equipping students for interviews and a successful career with future employees. Stenhouse identifies such a problem and has provided in figure 3 an important insight regarding the curricula design which he argues that should make available a plan, study it empirically and provide the justification of selection. Stenhouse (1975) defined curriculum "*an attempt to communicate the essential principles and features of an educational proposal in such a form that it is open to critical scrutiny and capable of effective translation into practice.*"



**Figure 3- Curricula design principles, Adapted from: Stenhouse (1975)**

From a planning standpoint Stenhouse highlights the importance of principles of the content selection in terms of what will be taught and learnt and the strategy how this will be achieved. Also, Stenhouse calls for the consideration of principles required to investigate the strengths and weaknesses of learners and be able to meet single cases within diverse groups. Assessment of students' progress is essential in defining strengths and weaknesses that would enable a tailored approach to the teaching intervention.

In addition, Stenhouse advises the consideration of empirical study aspect where the curricula designers should reflect upon the principles that will be utilised to assess learners' and

teachers' progression. Also, consider curricula implementation from different contexts such as school background, learner's characteristics and group projects. Importantly, to take into account the outcomes deriving from different contexts and make sense of what causes the variations. In regards to justification, Stenhouse underlines the need to frame an aim of the curriculum that would allow access for critical investigation.

In addition to Stenhouse views and contribution another strategic issue highlighted within the literature of curriculum theory consists of centralisation and decentralisation. According to McKimm (2003) centralised curricula are well structured, easily to follow and achieve unification in terms of teaching and learning. Also, provides access to a wide range of expertise, however, appears to be less sensitive to local requirements and needs. On the other hand, decentralised curricula provide ownership to the teachers regarding the course and meet the local needs at a better level. Moreover, it allows for a combination of approaches in regards to design and delivery by creating opportunities to compare strengths and weaknesses of the applied techniques.

In a nutshell the main curriculum models are classified as product when the focus is on plans and intention and process when concentration is on activities and effects (Neary, 2003), such as assessment and consequent teaching and learning interventions. O'Neill (2010) noted that product models that have been created as a result of Tyler's (1949) work have received criticism for the over emphasis on the learning objectives. However, the product model method has been effective in communicating clearly the learning objectives to students. Literature suggests that when composing curricula under this philosophy designers should be cautious not to be very prescriptive when it comes to writing the learning outcomes (McKimm, 2003; O'Neill, 2010; Neary, 2003). Higher Education accrediting frameworks suggest that learning outcomes are the focus of assessments, whether those assessments are formative or summative assessments they should be focused on identifying attainment of those learning outcomes, Pearson (2016) and QAA (2016).

Process models however have intrinsic values which aim, is not only at, meeting the learning objectives as product models intend. Such models will consider more features than content, objectives methods, student assessment and programme evaluation even though these elements are included within the process (O'Neill, 2010; Gosper and Ifenthaler, 2013). Therefore, under this philosophy curricula design including student assessment is considered a continuous process which is updated in accordance to theories, philosophies, beliefs and experiences encountered.

### **Analysis of Business studies Programmes in Higher Education**

This section will focus on explaining several aspects of the Higher National Certificate (HNC) or Diploma (HND) in Business curricula in order to contextualise the research through a combination of aspects related with the literature review and the research methodology. The Pearson EDEXCEL Higher National Diploma comes under the scrutiny of the UK Ofqual, Regulated Quality Control Framework (QCF) and since 2016 under the Ofqual Regulated Qualifications Framework (RQF). Within those frameworks HND is considered as a level 4 (L4) in the first year and level 5 (L5) in the second and final year of the full time version of the course programmes.

This curricula is aimed at students studying HNC/D who seek to progress to university programmes or industry. The programme aims at developing and equipping students with a

set of transferable skills and knowledge within the area of Business and Management. This is achieved through coordination between several stakeholders such as staff, accrediting bodies (Pearson), Quality Assurance Agency (QAA), academic and industrial partnerships. One of the main stakeholders, the accrediting body, is very much learning objective oriented by providing several assessment criteria that built on this. On the other hand, as part of the academic staff, educators, tutors and teachers are encouraged to promote and develop critical thinking and constructive discussions. There is expectation that curricula design includes a well aligned process between assignment briefs, learning materials and activities and expected outcomes. However, the delivery of learning materials in accordance with learning objectives and particularly assessment criteria guide learners to narrow their focus by concentrating on specific assessment criteria. This is seen to have a negative effect on student's levels of creativity, imagination and involvement. Many concerns consist of students not being motivated, confused and working on assignments when they are due only to meet the assessment criteria. This as previously discussed interferes between the approaches of a product model which is outcome oriented and a process model that fosters the critical thinking and students taking ownership while participate in academic activities. Additionally, a product oriented curricula is valuable in establishing a set of academics skills and introducing rigorous practices, in other words equipping learners with what they should embrace for a successful academic life and many academics support a more holistic approach to student assessment (Keeley, 2015; Carless, 2015).

Consequently, principles of creativity and innovativeness may not be developed when the focus is on attainment of learning outcomes. It is argued by many, that such principles are fostered in level 6, final year degree programmes and also post graduate level study such as level 7 and level 8 where students are expected to be more critical, demonstrate deeper understanding and contribute to the development of the field through a process curricula approach though there is a product outcome at the end which consists of the degree (Carless, 2015; O'Flaherty and Phillips, 2015). Having explained the differences in those learning expectations across those academic levels it is argued by some educationalists that a process curricula design is more adaptable in teaching adult learners (O'Flaherty and Phillips, 2015; Bertheussen, 2014).

### **Assessment and Employability Aspects of Business Studies Curricula**

The employability aspect is of a high importance as it assures the transition of the learners from college/university auditoriums to industries where there is a different reality accompanied by a demanding work environment, performance and competition. The design of Business Studies curricula has a clear intention in contributing to student employability skills and increasing the chances of students to enter employment. According to Yorke (2004) employability is defined as

*“A set of achievements-skills, understandings and persona attributes-that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy.”*

Therefore, Business course assessment should include employability achievement skills assessment. In order to achieve a curriculum that would successfully address employability skills academics should consider an integration of four elements such as understanding, skilful practices in context, effective beliefs and metacognition (Yorke, 2004; Tee and Ahmed, 2014; Nordberg, 2008).



Having said that, curricula under this study, the Pearson HND in Business, emphasises transferable skills associated with composition of job descriptions, strategies for recruitment and selection, industrial relationships, types of contracts, appraisal and rewarding systems. Therefore, the Business Studies in terms of the content, curriculum is satisfactory, meeting and considering stakeholders needs continuously. The issue relies upon students' ability to embrace the information delivered every session rather than demonstrate efforts only for achieving an assignment completion. This might compromise the quality of learners' skills and as result the employability opportunities. Consequently, monitoring students' progression on a weekly basis through multiple tests can support the students' development as technique assessing transferable skills and knowledge thus encouraging student focus on those employability skills. Likewise, educational researchers', Hardy et al. (2014), Imrie et al. (2014) and Rodrigues and Oliveira (2014) have suggested that regular assessment is conducive to improved grades and hence higher pass rates.

### The Action Research Programme, Findings and Discussions

The increase of formative assessment through application of short tests was conducted with the purpose of aiding, the complete cohort of 19, students' learning and development process. The information collected from the case study provided insights regarding students' responses towards the new form of formative assessment exercised in the period of ten weeks. Starting from the left, the first column in Table 2 indicates the types of assessments that were used to monitor and evaluate students learning progress. The second column represents the timings allocated to each of the applied types of assessments. The in class formative assessment was conducted weekly and the assigned completion time was within the limit of 12 minutes, while the summative assessment consisted of two Business Reports of 3,600 words handed out in the first week and due for submission on week 11. The table continues by explaining the assessment instruments in the third column where it explains the composition of the formative in class tests and the nature of the summative assessment. These details are followed by the fourth column which clarifies the methods of administering the types of assessments which consisted of individual in class tests and individual report of formative and summative assessments respectively. The last column explains the purpose of each of the instruments used in supporting students' learning and development process from different angles. Furthermore, aiming to illustrate student's responses towards the application of in class tests the field notes were used to extract relevant information from and below is presented on a weekly basis for the time span of 11 weeks.

**Table 2: Summary of assessments instruments and purposes used in the action research**

Types of Assessment	Timings	Assessment Instruments	Methods of Administering	Purpose of Instruments
Formative Assessment	12 Minute test each week for ten weeks	Eight questions multiple choices	Individual in-class tests	Improve topic knowledge and enhance vocabulary and basic terminology
		Four questions needed extended answers	Individual in-class tests	Understanding of theories and models to complete the Business reports

Summative Assessment	Three assignments To be submitted week 11	MCKI 1 of 3 [PCP] MCKI 2 of 3 Business Report MCKI 3 of 3 Business Report	Individual reports	To award the final term grade
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### Week one

The class of 19 students were briefed that conducting short tests on a weekly basis would help their learning process and would help them achieve a better performance at the end of the term. The students were notified that previous cohort results had been disappointing. The majority (n=15) of students reacted positively but inquisitively and asked questions regarding the content and the length of the test and how such practice would help their individual learning needs. However, students (n=4) commented that they did not agree with the application of tests as such formative assessment did not have a direct contribution to the final grade of the summative assessments which were two Business Reports, circa 3,600 words. The students were asked to kindly see how this new method of formative assessment would work and that collectively the tutor, support team and students would discuss the methods and results at a later date. At the end of the session of week one the test was administered and all 19 students handed in their answers for marking by the tutor.

### Week two

Week one test results showed that the majority of students (n=17) had struggled with some content. In the second week students (n=all 19) appeared more accommodating to the tests, however complained regarding the allocated time given for the test which was administered over 12 minutes for 12 questions of which eight were multiple choice and four questions required elaborate discursive answers. Although the test had a constructive purpose and did not contribute to the final grade the time was an element that was set in order to assess and encourage students' performance under pressure and students were informed that the length of the formative assessment test would not change in future weeks. There was little in terms of emotional engagement of the students' toward the tests and again the test was administered formally for the allocated 12 minutes and 12 new questions were presented.

### Week three

In the third week results of the week two test were not at the tutor's expected level and the tutor considered students showed lack of theoretical understanding. Those observations encouraged the action research tutor to intervene by starting the class with a quick summary of the previous session with particular emphasis on the theories covered in that previous session. The students were asked to try the first two weeks test again at home and a new test, on this occasion, was administered half way through the scheduled class covering the topics discussed during the class. One student had commented to the class that the four questions that they had been asked to provide extended answers for were directly related to the summative assessments exercises they had been given, i.e: 'The Business Reports.' Following that comment several students [n=8] became very vocal in supporting more class discussion of the link between the formative assessment tests being administered in class and the final summative assessment to be completed for grading. The tutor explained the linkage

of tests to the summative assessment and explained the concern that not all students were taking these tests seriously.

#### **Week four**

The results of the previous three weeks tests showed little improvement in students' ability to answer questions in the formative environment. In response to the outcomes of the tests in those previous weeks and the vocal support of more class discussion, the action research tutor created five groups of three students and one group of four students and called these learning sets. Each of the learning sets included one higher achiever student, one student with a satisfactory performance and one student who required further improvements in an attempt to balance the sets' overall ability and also a purpose of this group arrangement was to help learners of different abilities to work collaboratively. Students had the opportunity to improve their knowledge by explaining it to their learning set and class peers through think- pair-share activities conducted in class. Individual tests were administered as previous weeks but on this occasion the action learning tutor encouraged the students to discuss their answers, after the tests, and how the answers would contribute to the summative assessment.

#### **Week five**

The results extracted from the tests, so far, allowed the action research tutor to identify the theories, models and concepts that learners were either happy with or experienced difficulties with. Also this provided the opportunity to expand on the theory through group work and in class research activities. Importantly, the information gathered through tests was used to feedback to the session plan of the following week in order to respond to students' learning and developing needs. Individual tests were administered as previous weeks, and as week four, the action learning tutor encouraged the students to discuss their answers and how they would contribute to the summative assessment.

#### **Week six**

The overall score of tests appeared to be better where the majority of students (n=16) demonstrated a good level of understanding and were able to make reference to different theories and models presented in class where previously that was lacking. The application of formative assessment and consequent in class interventions, such as think - pair - share and group debate, helped students to extract and embed the necessary theories required to develop the 'Business Reports' used as summative assessments and the final grade. The students collectively had accepted that the formative assessment had contributed to learning and more importantly for them had a significant impact on their understanding of the theoretical concepts needed to complete their final assessment, the Business Reports. The field notes in the tutor's log noted that there had been improvement but also questioned whether this was due to the formative testing regime or the engage of student led class discussion.

#### **Week seven and eight**

As a result of observations in the previous weeks one to six, the learning sets were rearranged due to some members being very quiet and not engaging with the rest of the group members. The quiet students were asked to facilitate their group discussions, while the more vocal and confident students were asked to support them, which under observation the tutor considered it slowly helped the quiet students' confidence and ability to articulate their opinions in learning set discussions. It was observed that the formative assessments were starting to

become fun for the students and there was no more animosity or hostility against the tests unlike the first two or three weeks of this experiment where the students had shown concern.

### **Week nine**

As the weeks progressed and students were under a systematic way of assessment it was noticed that a number of questions from students' in clarifying topics or themes covered in previous classes decreased and students demonstrated a better level of ownership of their own teaching and learning. Individual tests were administered as previous weeks, and likewise, the action learning tutor encouraged the students in their learning sets to discuss their answers and how they would contribute to the summative assessments but on this occasion students were spending more time directly discussing their own formative assessment, 'Business Reports'. The observations showed that, for more students; more complete answers were emerging for the discursive questions.

### **Week ten**

Students commented that this method, of formative assessments, kept them engaged throughout the term and the application of perpetual tests was seen as a technique that would contribute to their overall unit grade. Students explained that by week four and five they felt that the knowledge gained was helping them to plan, organise and structure the summative assessment. Individual tests were finally administered as previous weeks and once again the action learning tutor encouraged the students to discuss their answers in their learning set and how answers would contribute to the summative assessment. But on this occasion the students needed very little encouragement and over half of the lesson was led by the students themselves working towards completing their summative report.

### **Week 11 Focus Groups**

The eleventh scheduled week served to gather students' perceptions on the application of weekly in class tests and the impact such formative assessment method had in their learning process. Therefore, the action research tutor was able to collect a wide range of opinions and feedback from students who were organised in learning sets of five groups of three students and one group of four students as previously mentioned and they were asked to focus on providing feedback of their experiences. The common understanding at the end of those focus groups was that students felt that the application of in class test had encouraged them to be persistent, organised and also facilitated the completion of the summative assessments (Business Reports-3,600 words). The four students that did not agree with this form of formative assessment at the beginning of the term now agreed that this method had significantly helped them to complete the business report on time. According to these students, the change in opinion was due to the expectations that were set on them during learning set discussions and the desire to not be the lowest performing students, thus encouraging them to read and prepare themselves systematically. Also, other students commented that this formative assessment method, coupled with working in learning sets, had helped them in building confidence and student ownership in terms of being able to develop and articulate their arguments verbally in class discussions. Consequently, that confidence had helped students prepare their final summative report.

### **Week twelve Unscheduled week of further evaluations**

In addition to the focus groups, as previously delivered parts of the curriculum had done, unit questionnaire forms followed by semi structured interviews were subsequently conducted with the purpose of gaining more in depth understanding of students' perceptions of the action learning exercise. The data collected from the unit questionnaire forms, as it had done for previous units, allowed the action research tutor to capture students' perceptions on unit's content, methods of delivery, quality of materials, library and ICT facilities together with tutor's readiness to support students' learning and development. However, on this occasion the main themes identified and extracted from unit questionnaire forms, related to the formative assessment experience, were further utilised and formed semi-structured questions employed in individual interviews scheduled with a group of six commenting students; including low [n=1], medium [n=3] and high performing [n=2] students. The main learning point for future formative assessment methods, based on those semi-structured interviews, suggested that:

- (1) All six interviewed students indicated that it was the whole class of students that asked that the time allocated to tests should be increased in order to allow learners more time for the last four questions that required extended answers.
- (2) Four of the six interviewees requested that the questions were explicitly linked to corresponding parts of the summative assessment in order that their learning sets could focus on helping each other with the final pieces of work.
- (3) One student [highest performer] asked that the formative tests became part of the overall grade for the unit. That student suggested it was their own thought only and not necessarily the wish of all students.
- (4) The interviewees did not like the idea that the tests could be administered on line for homework style formative assessment. They indicated the overwhelming view being that in class tests followed by learning set discussion was the best way to progress.

These evaluations indicate that students were satisfied with the action learning programme and that there was support for formative assessment. In some ways this confirmed that the action learning tutor had gained insights into the learning requirements of the students at an individual level and at the cohort level and therefore the interventions made had motivated the students to engage positively and willingly with their own learning.

### **Comparing results with previous cohorts**

The previously run MCKI unit was in 2015 -2016 academic year when out of the total of 47 students all of those students were referred in at least one of the three assessment instruments. That cohort of 47 students had been deferred from the previous academic year, 2014-5, representing three different intakes of students. There had been 19 students in the action research cohort and 18 of those students submitted all three assignments and thus completed the course successfully, see table 3 for results. So arguably, there has been a considerable improvement in results and there is hope that the one non submission student (NS) will submit and pass the unit in the near future.

The three assignments for the Managing Communication, Knowledge and Information (MCKI) unit are shown in table 3 as MCKI 1 of 3 which asked the students to provide a

short, no more than 400 words personal communication plan. The second assignment MCKI 2 of 3, as with the third assignment MCKI 3 of 3, tasked the students to produce business reports of a total of 3,600 words. The table 3 also shows the number of students that passed (P), received a merit (M) or a distinction (D) for submitted assignment work and shows that one student did not submit (NS) any assignment work and therefore received a referral for this unit.

**Table 3: Student’s academic performance for action research group, MCKI unit**

Action Research Class: Managing Communication Knowledge and Information-MCKI							
Academic Year	No of students Graded	Assignment Number	Grade Result				% Students passing
			P	M	D	NS	
2016-2017	19	MCKI 1 of 3 [PCP]	18	0	0	1	94.7
		MCKI 2 of 3 [Business Report 1]	13 [of which 5 initially referred]	3	2	1	94.7
		MCKI 3 of 3 [Business Report 2]	18	0	0	1	94.7

Direct comparisons in grades do not categorically indicate that this action research resulted in improved performance because many variables exist, such as the number of students, teaching and learning methods, tutors allocated to deliver and differences in demographic background or entry characteristics could be key variables, but there is nevertheless an indication of improvement in grades as previous all students had received referrals even after deferring a full year and re-sitting classes.

### Implications of the Action Research

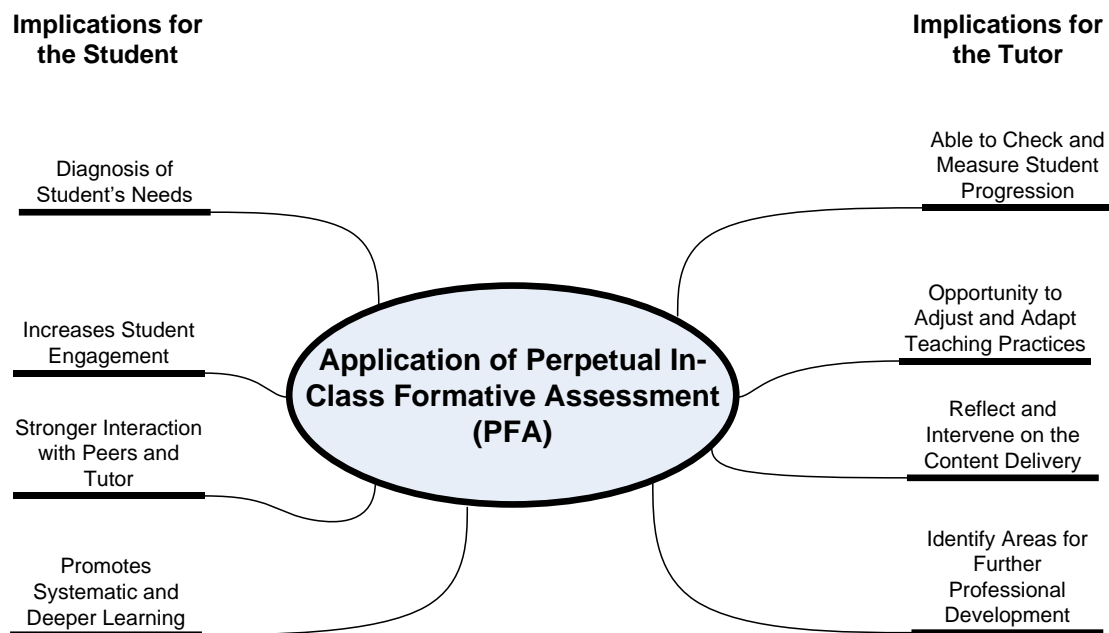
Previous results have been obtained and compared to the grades achieved from this action research cohort and arguably shows that there has been a massive improvement in the pass rate. This is a promising result and certainly one contributory factor has been the adoption of formative in class assessments. However, it is recognised that other factors may have contributed to the success and the authors do not disregard the possibility of “The Hawthorne Effect”. According to Merrett (2006) the Hawthorne effect is understood as a type of reactivity in where individuals modify their behavior in response to their awareness of being observed. The action research was initiated from pressure within the case study organisation to improve student unit achievement results and thus reduce the number of deferrals and referrals. Hence, the student cohort taking part in the action research certainly noticed they were being observed as they were part of the action research programme.

The action research conducted on the time span of 10 weeks provided the opportunity to investigate the response of the selected sample in regards to the application of weekly in class

tests. The application of action research indicated that Perpetual Formative Assessment (PFA) allows the teacher to observe and manage students' progression at a deeper and consistent level and be able to respond and adapt to any changes that might be required in order to enhance student's learning experience. Learning points extracted from the action research tutor weekly field notes and post unit delivery focus group discussion, post unit questionnaire and post experiment semi structured interviews implications of students and teachers found in this research are listed below and form the basis of the diagram illustrated in figure 4:

- Not necessarily just formative tests but also student engagement is believed to enhance student learning.
- Individual's confidence is built through interaction of tutor directed discussion of formative assessment in student learning sets.
- The application of tests provides an opportunity for the teacher to learn from perpetual formative assessment (PFA).
- Formative assessment should lead towards other adopted teaching methods to give better student learning.
- Formative use of tests covering basic and fundamental theories can provide good foundation for deeper learning.
- PFAs' help identify learner's ability and so be able to undertake teaching interventions.
- PFAs' led into a positive learning behaviour thus suggesting PFAs' should be incorporated into session planning and hence become part of overall education programme.
- PFAs' should use a mixed approach in dividing individual and group assessments. Suggesting that learning sets is a good complementary teaching technique.

Figure 4 demonstrates the implications that PFAs' have on the development and academic progression of students. Being able to diagnose students learning needs allows the tutor to be proactive and undertake the required actions to respond to the identified needs at an individual and group level. Additionally, the continuous application of in class tests sets clear expectations on students and encourages systematic and deep learning. The accumulated knowledge on a weekly basis provides the opportunity for tutors to initiate and manage group discussions of a better quality and encourages the sharing of individual knowledge at a group level.



**Figure 4- Implications of PFAs' on the student learning experience and teachers professional development**

The research experiment indicated that formal creation and use of learning sets should be encouraged as part of group learning supporting individual learning. This aids students in developing and strengthening critical thinking skills as it provides the opportunity to reflect and evaluate on the information and knowledge attained as the term progresses. On the other hand, the tutor is able to check the absorption of new learning material and identify barriers or difficulties that are associated with subject's content, learning objectives, academic theories and terminology. That allows tutor to closely monitor students' progression and proactively respond to individual student's learning needs. As a result of information collected via weekly tests tutors have the opportunity to identify any training needs that might be required to improve skills related to curricula design, delivery of the content and forms of assessments.

## CONCLUSIONS

This action research was conducted with the initial purpose of improving students' academic performance on the unit of Managing Communication, Knowledge and Information part of an HND Business and Management programme. The application of perpetual in class formative assessments as a means to enhance the students' learning experience provided constructive insights that continually informed the action research tutor of student progress. The academic team of the case study organisation supported the action research and reviewed the improvement in results following the unit summative assessment. The insights collected out of this research have implications for the design and delivery of teaching and learning and are



both administrative and pedagogical in nature. From an administrative perspective, insights gathered from this research allowed the tutor to have a better understating of unit administration in terms of teaching material preparation, session planning and scheduling, theoretical and practical content and methods of delivery and assessment instruments.

Pedagogically, the research allowed the tutor to establish a deeper comprehension of students' abilities and characteristics, learning needs and their individual barriers to a good academic performance. Subsequently, the tutor was able to respond to all the students' learning needs at an individual and cohort level and incorporate that in session plans. Furthermore, the consistency of formative assessment had a positive impact on student engagement, improved in class interaction and importantly was shown to increase the depth of subject knowledge which was essential for the completion of the summative assessments. In addition to the support of students' learning, perpetual formative assessment allowed students a better adaptation to the workload of the programme by contributing to improving their organising and time management skills.

The results collected from in class tests allowed the tutor to intervene and be able to organise learning sets and use other formative assessment methods that helped students in areas where further support was required. Although the design of assessments depends on the programmes' specifications, the teacher's approach to content delivery and assessment and the academic board of the institution, this research noted that a combination of formative assessments, such as in class tests, together with the in class activities and discussions held by learning sets enhanced the students' learning experience and contributed to a better academic students performance.

## **FUTURE RESEARCH AND PROPOSALS**

Acknowledging that 'one swallow does not make a summer' [*one incident of an event does not necessarily indicate a trend*] the authors believe that this form of formative assessment, using perpetual in class tests, should be adopted into other business and management units, not only to investigate the validity and reliability of the findings of this research, but to examine if such practice will have the same positive effect in other students' learning experience and other institution's academic statistics. Doing so, allows the institution to collect a wide range of data in regards to students' progression and academic performance. By making use of these data, institutions will be able to evaluate their teaching and assessment practices and be able to strategically intervene by developing and/or adjusting their curricula design by incorporating effective perpetual in class assessment methods. The authors hope that providing a detailed explanation of what action research occurred in this case study setting and thus illustrating an indication of possible educational action research results this paper invites higher educationalists, lecturers, teachers and tutors to try out educational research for themselves and adopt an investigative attitude that will help improve and evaluate such practices. Furthermore, albeit with this one case study only, the authors have shown that educational research can contribute to institutional improvement and thus encouragement is given to leaders and managers of higher education to formally acknowledge action research has a positive place in continual improvement programmes.

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