Applying curricula design principles to enhance students learning experience via in-class formative assessments

Enis Elezi is a PhD research student at University of Bolton undertaking a research focused on Knowledge Management and Knowledge Transfer practices among British educational partnerships. Currently Enis is involved in delivering business subjects and tutorials for HND students at OLC (Europe).

His areas of research interests include Knowledge Transfer, Organisational Learning, International Knowledge Transfer Partnership Strategies, Trust and Inter-organisational Communication Channels and Knowledge Management across Borders.

Abstract

This research is focused on investigating the application of curricula design theories as means to improve the delivery of materials for Human Resource Management (HRM) subject in HND programmes. Analysis of HRM curricula set an emphasis on the relationship between the materials delivered in educational institutions and employability skills embraced by students required for further progression in academia or industry. The 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 author believes 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 will rely on qualitative grounds, applying observations and focus groups as research techniques. Moreover, the data collected will be discussed and analysed embracing an interpretivism approach and elements of reliability and validity are also discussed.

Key Words: HRM Curricula Design; Formative Assessments; Student Engagement; Learning Experience; Transferable Skills; Employability Skills;

Introduction

This project consists of undertaking an action research approach to enhance aspects of the curricula design. It will be developed based on an assessment perspective and will investigate the implications of applying formative assessments in order to increase the students pass rate through increasing motivation and engagement of learners. The main concern relies on establishing an effective teaching and learning process where students would be embedding skills and knowledge that would aid their progression to further education or industry roles. Majority of students have the propensity to work on summative assignments when deadline approaches, thus not being systematic and consistent in skills development. Therefore, this research raises a hypothesis which intends to exploit the application of tests as a technique that would enhance students' learning experience and improve employability opportunities. The following section is constructed by providing a literature review which discusses the aspects of action research, formative assessments, curricula design and employability. Afterwards, a section dedicated to methodology with emphasis on data collection and methodology applied in this research are discussed.

Action Research within Educational Context

As many academic themes and concepts, action research has generated a variety of definitions where academics express certain disagreements in what it should be and include.

According to Kemmis and McTaggert (1990) (see fig.1) action research is defined as "a form of collective self-reflective inquiry undertaken by participants in social situations in order to improve the rationality and justice of their own social or educational practices, as well as their understanding of these practices and the situations in which these practices are carried out".

Another definition was cited by McKernan (1991) stating that action research contributes to "practical concerns of people in an immediate problematic situation and to the goals of social science by joint collaboration within a mutually acceptable ethical framework". Even though, differences are noticed in defining and understanding action research, the common consensus relies on framing it as an inquiry applied by individuals within the organisation, institution or group where their work activities take place. The aim consists of proposing, justifying, applying and evaluating the changes deriving as a result of the action research undertaken.

The idea revolves that changes appear within the context of research, including researcher itself and participants or stakeholders involved within the project. This action research will aim to investigate the impact that an increase of formative assessment has in improving student engagement and as a result increase the overall pass rate.

Figure 1- Action Research Framework

2.2 Types of Assessments

Assessments are employed in order to support learning and evaluate students' engagement and understanding with the knowledge delivered. Such evaluations are widely known as formative and summative. According to Black & Wiliam (2003) the term formative evaluation was initially introduced by Micheal Scrive in 1967 in regards to the curriculum and teaching aspects. However, Black & 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. Having highlighted this from the literature review I intend to increase the number of in class formative assessments such as multiple choice tests in order to gain a better understanding of learns engagement and learning needs. This technique also helps to reflect on my own teaching practices and adjust where needed. Furthermore, this technique of formative assessment is introduced after a consideration of Par 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.

2.2.1 Significance and Implications of Formative Assessment

The formative assessment aims to spot learning objectives and measure students progression towards the objectives stated. 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 objective. This will shape students abilities in becoming goal oriented rather than performance oriented. In other words, students will train the ability to learn continuously meet the goals independently and consistently rather than be assessed for performance purposes only. One of the advantages relies upon the ability of this method to enhance students learning without compromising their confidence. 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). 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 & William, 1998a).

A considerable amount of the group of students in my class have the tendency to work on the assignments when the deadlines approaches thus not allowing enough time to conduct an appropriate research and consider a range of sources, different academic perspectives within the area or topic discussed. Also, the quality of work is not at the expected level and I feel majority of students have worked on the assignment only to meet an academic requirement. My concern consists of the students being able to embed an extensive knowledge from Human Resource Management (HRM) subject and through individual research that would equip them with the

adequate skills to improve their employability chances. Otherwise, the purpose of student frequenting an educational institution is vague and does not assure a constructive life decision which will also have negative consequences within societies or communities. Hence, 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 & Gardner, 2012; Black & 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.

2.3 Curricula Design Theory

The curricula design has continuously gained prominence because it provides the foundation for investigating the link between academia and industry 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. Stenhouse has provided 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''.

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.

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). O'Neill (2010) noted that product models that have been created as a result of Tyler (1949) work have received criticism for the over emphasis on the learning objectives. However, product model 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, M. 2003). On the contrary side, process models have intrinsic values and do not aim at only meeting the learning objectives as product models intend. Such models will consider more features than content, objectives methods and evaluation even though these elements are included within the process (O'Neill, 2010; Gosper & Ifenthaler, 2013). Therefore, under this philosophy curricula design is considered a continuous process which is updated in accordance to theories, philosophies, beliefs and experiences encountered.
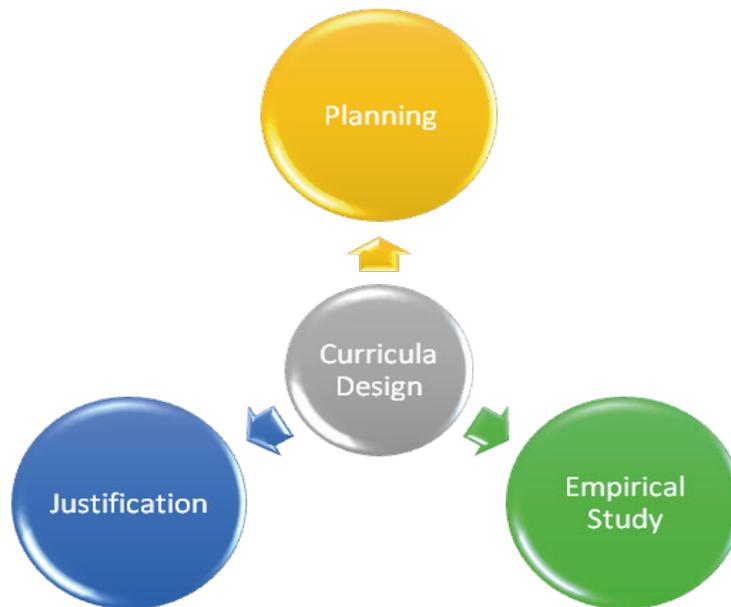
Figure 2- Curricula design principles/Adapted from: Stenhouse (1975)

2.4 Analysis of Human Resource Management Curricula

This section will focus on explaining several aspects of my own curricula in order to contextualise the research through a combination of aspects related with literature review and research methodology and forms.

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 Human Resource Management (HRM). This is achieved through coordination between several stakeholders such as staff, accrediting bodies (Pearson), Quality Assurance Agency (QQA), 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 academic staff we are encouraged to promote and develop critical thinking and constructive discussions. There is 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. My concern consists of students not being motivated, confused and working on assignment when they are due only to meet the assessment criteria. This 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. From several tutorial sessions or drafts that I have revised, learners had presented very good ideas and discussions, however, because they had not covered an assessment criterion they were advised to reconsider the answer. In my understanding this raises barriers for the student to be intellectually involved, engaged and challenged where instead s/he follows strictly a given guide. Consequently, principles of creativity and innovativeness are not much developed. Such principles are fostered in level 6 and particularly 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. All this, takes place in compliance to academic regulations and standards but not on a much narrowed guide as opposed to level 4 and level 5. This might be as a result of the gaps between academic levels and experience; however, I believe that a process curricula design is more adaptable in teaching adult learners as it is in my case.

2.5 Employability Aspects

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 HRM curricula has a clear intention in contributing to student employability skills and increasing the chances of students to enter within industry. 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''. 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). Having said this, curricula emphasises transferable skills associated with composition of job descriptions, strategies for recruitment and selection, industrial relationships, types of contracts, appraisal and rewarding systems. Even though, the majority of these themes were part of the previous curricula they were expanded after the suggestions and recommendations provided in the report produced by QAA. Therefore, I believe that 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, I believe that monitoring students' progression on weekly basis through multiple tests serves students as a technique to embrace transferable skills and knowledge. This has a positive effect as it contributes to students being more prepared because of the psychological test effect, better grades, higher pass rate and better employability skills.

3.0 Methodology

This action research intends to investigate that application of formative assessment such as in class short tests increases student pass rate and alongside improves motivation and student engagement, thus forming the main hypothesis of this investigation. The current work focuses on proposing a theme of interest for further investigation, as stated above, and provides theoretical justification in regards to theoretical background and methodology selected. Lichtman (2012) discusses that aim of research is to explain what we know and that derives as a result of the methodologies and approach we decide to apply.

Any research can make a use of qualitative, quantitative or a combination of both and that applies in educational projects as well (Schostak, 2002). These methods are able to investigate and understand the phenomena, however, the qualitative method processes the information collected directly from the sample in an exploratory approach. This allows the researcher to gain a deep perspective and produce new theories, opinions and ideas associated with the phenomena studied. Having said this, qualitative method is applicable to my study as it will allow me to understand the effects of the new technique applied in class. I will also be collecting information that will be in numbers and quantified, however, that will be interpreted from a qualitative approach. For example, comparing the overall student passing rate between terms or compare the results of tests between first and last week for every individual to see if s/he demonstrates a higher performance as a result of the action undertaken. The justification behind this approach consists of embracing an interpretivst stance as it allows the research to plan, apply, collect and interpret the data collected within the social context that study takes place. The positivist approach, which focuses on the quantification of data collected and relationships amid variables would not provide opportunities to explore the dynamics of the social context.

Methodology is a crucial aspect in any research as it defines the technical approaches and forms the patterns of data collection methods and analysis, thus justify and make sense of the outcomes.

According to (Neary, 2003; Eddy et al.2015) methodologies within an educational action research project might include one or a combination of the following:

- Observations
- Video and audio recording
- Photographs
- Focus groups
- Questionnaires
- Keeping field notes
- Apply structured or semi-structured interviews

For the purpose of this action research I will select to apply observations and focus groups. The observation method will allow me to see what the students' reaction would be in terms of performance, engagement and motivation. While focus groups would provide the opportunity of finding out students' perceptions on the new technique introduced and be able to receive any constructive feedback that could be incorporated for further improvement. A combination of these two methods will deepen the evaluation and analysis of data collected by investigating if the information and perceptions from observations and focus groups provide a unified understanding. Therefore, methodology of this research is expressed in the figure below.

I have created an observation form that includes several performance indicators to be used for evaluating each student's performance on weekly basis (see appendix 1). These indicators were selected based on my own experience as the elements that show student involvement, participation and progression. The rational of selecting observation method is that allows the research to monitor samples' reactions to new activities, communication, participation and behaviour (Schmuck, 1997). Importantly, it establishes 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 my case will be focus groups. According 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 of selecting this method for my action research project since I will be introducing the application of weekly tests. Furthermore, is a method that allows the researcher to collect information that might be sensitive for learns and are not willing to share in other method 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. Additionally, I have created a focus groups template that will be asking five questions in attempting to collect information from students and have a better understanding of their perception. These questions will be applied to five groups of students with four participants in each group. In order to eliminate any bias or interference from myself I would be sending a request letter to two of my colleagues to facilitate the focus group activity so students would not feel pressurised while expressing their opinions. The reason for two facilitators is justified with the attempt of having a variety of opinions at the end of the focus groups in case certain themes are not very clear or simply to assure that information was collected and considered.
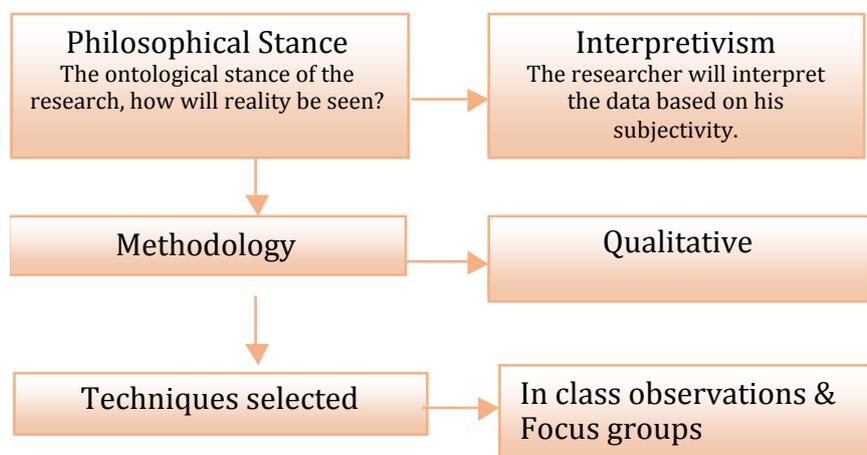

Figure 3- Methodological framework of this action research.

4.0 Conclusions

This work has provided an academic justification for the action research proposal submitted at the beginning of the term. It aimed at producing a map guide of how the intended investigation will be applied and has justified the selection of literature, themes discussed and the selected research methods to be applied in order to generate reliable findings. This action research has raised the hypothesis that application of formative assessments such as in class test increases student pass rate and also positively affect students' motivation and engagement. Through data collection methods such as observation and focus groups and analysis I hope to attain final outcomes that would support the hypothesis of this research. In other words, that applying formative assessments such as weekly tests increases students' pass rate and also enhances students' engagement and motivation.

The data regarding the student pass rate will be compared with final results of previous cohorts studying the same unit (Human Resource Management) to reflect upon the effectiveness of the formative assessments applied (weekly tests in class).

5.0 Future research

From a curricula design point of view, further research could investigate at what extent does the application of physical and moral rewards at the end of the unit impact the intrinsic and extrinsic motivation levels for higher performance. Also, explore any possible differences if the same formative assessment technique (multiple choice tests) would be applied to engineering students.

References

Black, P., & Wiliam, D. (2003). 'In praise of educational research': Formative assessment. British Educational Research Journal, 29(5), 623-637.

Black, P., & Wiliam, D. (1998). Inside the black box: Raising standards through classroom assessment. Granada Learning.

Bloom, B. S. (1971). Handbook on formative and summative evaluation of student learning.

Burke, K. (2010). Balanced assessment: From formative to summative. Solution Tree Press.

Cohen, L., Manion, L. and Morrison, K. (2000) Research Methods in Education 5th Edition.London: RoutledgeFalmer. See Chapter 17 pp 306 - 316.

Eddy, S. L., Converse, M., & Wenderoth, M. P. (2015). PORTAAL: a classroom observation tool assessing evidence-based teaching practices for active learning in large science, technology, engineering, and mathematics classes. CBE-Life Sciences Education, 14(2). Chicago

Gardner, J. N., & Gardner, J. (Eds.). (2012). Assessment and learning. Sage.

Gosper, M., & Ifenthaler, D. (2013). Curriculum models for the 21st century: using learning technologies in higher education. Springer Science & Business Media.

Kemmis,S., and McTaggert, R., (1990). The Action Research Planner Geelong: Deakin University Press

Lichtman, M. (2012). Qualitative Research in Education: A User's Guide: A User's Guide. Sage.

McKernan,J., (1991). Curriculum Action Research. A Handbook of Methods and Resources for the Reflective Practitioner London: Kogan Page

McKimm, J. (2003). Curriculum design and development. Paper for project led by London Deanery, 1-32.

Neary, M. (2003). Curriculum concepts and research. In Curriculum studies in post compulsory and adult education: A teacher's and student teacher's study guide. pp 33-56. Cheltenham: Nelson Thornes Ltd.

O'Neill, G. (2010). Initiating curriculum revision: exploring the practices of educational developers. International Journal for Academic Development, 15(1), 61-71.

Schostak, J. F. (2002). Understanding, designing and conducting qualitative research in education: Framing the project. Open University Press.

Schmuck, R. (1997). Practical action research for change. Arlington Heights, IL: IRI/Skylight Training and Publishing

Stenhouse, L. (1975). Defining the curriculum problem. Cambridge Journal of Education, 5(2), 104-108.

Tuttle, H. G. (2009). Formative assessment: Responding to your students. Eye On Education.

Yorke,M.(2004).Employability inHigherEducation: What it is, What it is Not. York: Learning and Teaching Support Network

Vispoel, W. P., & Austin, J. R. (1995). Success and failure in junior high school: A critical incident approach to understanding students' attribution beliefs. American Educational Research Journal, 32(2), 377–412