

Blended Learning in Practice

Spring 2019

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Editorial

Welcome to the spring 2019 edition of our e-journal Blended Learning in Practice. In this edition we have seven research articles from participants on the Post Graduate Certificate in Learning and Teaching in Higher Education (PGCertHE) programme at the University of Hertfordshire.



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Within this edition:

Debbie Gurney reviews the literature in relation to Interprofessional Education (IPE) and student midwives and critically analyses the findings in relation to the timing of IPE modules within undergraduate programmes. The use of socio-cultural, workplace-based learning theories to promote IPE are explored with the communities of practice model being specifically addressed.

Danny Buckley investigates the implementation of heutagogy within the higher education environment. His study considered the adoption of heutagogical approaches with students and how such an approach could create a self-directed learning experience. The difficulties of adopting such an approach are investigated and the beneficial learning outcomes of heutagogical learning such as employability and self-directed learning are discussed.

David Ingledew examines the learning and subject issues faced by undergraduate history students at the University of Hertfordshire. David explores the relationship between students and the discipline of history, specifically their perceptions of history learning and teaching, and their preparation for the demands of undergraduate academic work.

Dom Shibli investigates how improving the design of PowerPoint slides can focus the learner's attention and reduce the demand on the learner to process the information. Dom highlights how slide design can have unintentional effects on the learner and identifies ways in which an educator can take advantage of the characteristics of the brain's working memory to produce slideshows that can support a more efficient learning process.

Rogerio Alves discusses how the use of a personal /pastoral tutor could help to reduce the attainment gap of Black, Asian and Minority Ethnic (BAME) students. Rogerio investigates how social learning and dialogic co-construction could be used to support BAME students and the role of pastoral support in achieving this. The issues of belonging and empowerment are also discussed in terms of reducing the attainment gap.

Sue Walsh explores how pedagogic theory could support her teaching practice as an opportunity to respond to the Climate Change Projections using theories such as the Action Research Spiral and Research Informed Teaching. Sue investigates raising student awareness of their own carbon footprint to encourage behaviour change.

John Davies (known as Davies) critically reflects on the possibilities and problematics of positioning compassion at the heart of his practice. A growing body of work recognises the centrality of compassion in teaching. It contends that a compassionate pedagogue can positively impact on the intellectual growth of students, their engagement and ultimately their academic success. Using reflective accounts from an autoethnography, Davies contributes to this debate looking at the potential of this approach and exploring its limitations.

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Contributor Profiles

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Debbie Gurney is a Senior Lecturer in Midwifery and joined the University of Hertfordshire from a clinical practice education role where she supported student midwives in the practice setting. Debbie completed a MA in Medical Education at the University of Bedfordshire, conducting research into the experiences of student midwives in learning how to assess and repair perineal trauma. She is passionate about the provision of quality midwifery education and the impact this has on the women and babies in our care.



Danny Buckley

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Danny Buckley is a Lecturer in Life Sciences and is currently studying for a Ph.D. in dementia therapy. With his current area of research being in the field of sociology, Danny aims to provide insight into the use of reminiscence therapy with those living with dementia and their carers and relatives. Danny also lectures in the subject area of Sport, Health and Exercise and forms one third of the Life and Medical Sciences Academic Support Unit. Danny has recently completed the CPAD programme. He is research active and uses the results of his research to inform his teaching practice.



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David Ingledew is a Senior Lecturer in Education (History) and Lead in Secondary ITE in the

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Dom Shibli is a Senior Lecturer in Secondary Science at the University after being a teacher for 20 years. He predominately worked in nonselective secondary schools in Hertfordshire and spent 2 years working in a school in Istanbul. He is working towards a Masters by Research on Cognitive Load Theory and its application in the classroom. He is also a Founding Fellow with the Chartered College of Teaching and supports them through resource writing and being an assessor for the Chartered Teacher Programme. In this issue of Blended Learning in Practice Dom demonstrates how slideshows can be used more effectively to support the learning process.



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Rogerio Alves is a Lecturer in Engineering at the University of Hertfordshire. After completing his Master's Degree Rogerio worked in industry as a Design Engineer before moving to the Oil and Gas sector where he was active from 2012 until 2017. Rogerio then joined the University as lecturer in the School of Engineering where he teaches on the Mechanical and Civil Engineering programmes. Rogerio has recently completed the CPAD programme and is looking to further develop his practice as a dual professional.



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Sue's background is in sustainable economic development and regeneration. She has

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Sue is a Senior Lecturer with her main focus on the MSc Sustainable Planning course. Amongst other modules, Sue leads on the postgraduate Sustainable Energy Module. Sue is also helping to develop the Smart Mobility Research Unit (SMRU) working with Co-Directors Scott Copsey, Sooda Ramalingam and others. Her interest is in all aspect of sustainable communities where people can move about, enjoy work and leisure opportunities within a low carbon community focussing on environmental health and wellbeing. Sue has recently become a Fellow of the Higher Education Academy.



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Interprofessional education: What are the experiences of undergraduate student midwives in the UK?

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Abstract

Interprofessional education (IPE) is viewed as an essential component of undergraduate programmes in health-related disciplines, with the aim of reducing poor perinatal outcomes by improving interprofessional collaboration, communication and team working in maternity units.

This article aims to review the literature in relation to IPE and student midwives and critically analyse the findings in relation to the timing of IPE modules within undergraduate programmes, the importance of professional identity to student midwives and how this is required for student midwives to feel their contribution to IPE is valued. But also, how this professional identity can create the by other professions as well as student midwives themselves perception that midwives are better than other health disciplines. The rationale for this is poorly understood but may lie in the differing philosophy of midwifery than other health disciplines and be perpetuated by academics.

Midwives and student midwives' perceptions of the relevance of IPE in both their education and future careers has been shown to affect receptiveness to IPE. The use of socio-cultural, workplace-based learning theories to promote IPE are explored, specifically the communities of practice model and how this could enable students to reflect on their experiences of interprofessional working in clinical practice to enhance their own learning and contribute to the development of a culture of interprofessional learning in maternity units.

Introduction and background

In the current undergraduate midwifery curriculum, interprofessional education (IPE) is undertaken for the first time with other undergraduate students in health disciplines including; nursing, physiotherapy, radiography, social work and paramedic science in the first semester of Year One. Feedback from student midwives relating to this module over the past few years has overall been negative, with students reporting difficulties in meeting with colleagues as well as varying levels of engagement with students from other disciplines. This has led to changes in the structure, organisation and teaching team. Again, in 2018-19, however, student midwives expressed negative views in relation to this module, including questioning its relevance to student midwives. As an experienced clinician who is new to academia, this is a huge concern, as effective teamworking and communication are essential in maternity units to ensure deviations from normal parameters are recognised and appropriately referred to our obstetric colleagues for further care. This article aims to review available literature in relation to student midwives and interprofessional education, to critically analyse the issues highlighted and make recommendations for future educational and clinical practice.

Interprofessional working is a central priority within healthcare and is promoted as a strategy to solve numerous problems within the health-care system; such as reduced job satisfaction, limited resources and poor clinical outcomes (Murray-Davis et al, 2011). Several reports have highlighted examples of poor communication and team work between professional groups that have led to adverse outcomes for patients (O'Neill, 2008), (Francis, 2013) and particularly in the maternity setting, where these failures have contributed to perinatal and maternal deaths (Kirkup, 2015), (National Maternity Review, 2016). The Nursing and Midwifery Council (NMC) include cooperative working, clear and effective communication and respect for the expertise and skills of colleagues as part of 'The Code' (NMC, 2015, updated, 2018). Nasir et al (2017) identified the need to include interprofessional education (IPE) in undergraduate programmes in response to the changing nature of healthcare, the development of new health care professions, such as physician and nursing associates, as well as the increasing expectation for interprofessional collaboration. Rogers (2010) suggested that the delivery of IPE to undergraduates prepares students for the complex, multi-professional environment in which they will be working following registration.

The most widely recognised and accepted definition of IPE was developed by the UK Centre for the Advancement of Interprofessional Education (CAIPE): 'Interprofessional education occurs when two or more professions learn with, from and about each other to improve collaboration and the quality of care' (CAIPE, 2002). Freeth (2014) made the point that several key themes can be extracted from this definition. For example; that education is defined by learning and the terms with, from and about implies learning based upon exchange, and the central aims are to improve collaboration and care. This definition has been adopted by the Royal College of Obstetricians and Gynaecologists (RCOG, 2008) and the Nursing and Midwifery Council (NMC, 2015) as they describe the need to remove professional barriers between obstetricians and midwives, create a learning environment that is supportive of collaboration and works to develop collaborative competencies (Murray-Davis et al, 2014). Murray-Davis et al (2011) cited that there has been very limited research into the application of the IPE competencies to interprofessional working in maternity despite government support. Additionally, this study highlighted that there is a significant gap in the IPE literature relating to the profession of midwives. A midwife, according to the International Confederation of Midwives (ICM) 'is recognised as an accountable professional who works in partnership with women to support, care and advise during pregnancy, labour and the postnatal period. Able to conduct births on the midwife's own responsibility and provide care for the infant. This care includes promotion of normal birth and the detection of complications in mother or child, accessing appropriate medical assistance when necessary and the initiation of emergency measures' (ICM, 2011).

Literature Review

A literature search was undertaken using the PubMed, Cinahl and British Nursing Index (BNI) databases; applying the search terms 'interprofessional education', 'student midwife' and midwifery. This search returned over 460 articles. The search terms were further limited to English language and full text articles. In total 38 abstracts were read and from these, five articles were reviewed in depth. All the studies took place within the United Kingdom with four of the five studies relating to undergraduate student midwives, and one sought the views of qualified midwives in relation to IPE.

The question of whether midwives' value interprofessional learning and working was asked by Murray-Davis et al (2011) in their qualitative study, collecting data through focus groups and semi-structured interviews. Their participants comprised midwifery educators, newly qualified midwives and heads of midwifery from four universities and their linked NHS trusts. Their results showed overwhelming support for the inclusion of IPE in their undergraduate midwifery programme, however, their results demonstrated conflicting views as to whether IPE training has relevance for midwives, with an obvious divide between the views of clinical midwives and university-based midwifery educators. The setting in which IPE takes place was identified as a barrier to IPE, as clinical staff may have a different agenda to midwifery educators. They highlighted the need for further research into the complexity of applying IPE to practice.

In their study, Anderson et al (2017) implemented a low fidelity simulation strategy for interprofessional education with final year midwifery students and fourth year medical students relating to normal labour and birth. The student midwives outlined the agenda for the interactive workshop and focussed on issues such as the promotion of woman centred care and relationship building in labour. The aims of this interprofessional workshop were different for the student midwives and the medical students. The medical students were about to embark on their first clinical placements in maternity units and the student midwives were able to teach them about the normal process of labour and birth. This led to

improvements in the student midwives' communication, understanding and confidence in their ability to interact with other professionals.

Murray-Davis et al (2014) conducted qualitative research using a grounded theory methodology to determine what factors promote the application of pre-qualification learning to professional practice in maternity care in the post-registration period. They used questionnaires, focus groups and semi-structured interviews to obtain the views of student midwives and midwives. Their results showed three themes: acquiring interprofessional skills, engaging with the curriculum, and supporting interprofessional education in the clinical area. These elements were thought by the authors, to be essential to the creation of an effective learning environment. Their study also found that many clinical sites did not have an accommodating organisation or framework in place to promote the IPE agenda either pre-qualification or post-qualification. This was viewed as a significant barrier to the application of skills learnt in interprofessional education into practice for both students and midwives.

A hermeneutic phenomenological study was the research approach used by Rogers (2010) in her study to explore the experiences of final year midwifery students in relation to interprofessional education. Her data analysis led to the formulation of three conceptual themes. These were; professional identity and understanding, socialisation and support and making IPE relevant. The study highlighted that student midwives valued the concept of interprofessional education, as it can improve their ability to work collaboratively by improving knowledge of their own profession as well as others. The responses from the student's also emphasised the significance of their social world and the need for lecturers to adopt a humanistic approach to their learning.

Netherwood and Derham, (2014) undertook a study to determine what undergraduate student nurses, midwives and complementary medicine practitioners could learn from one another and whether this had any educational value. They used a mixed methods approach and analysed data collected through focus groups. Six themes were identified; interaction, breaking down prejudices; increased knowledge and understanding of self; increased knowledge and understanding of self; increased knowledge and understanding of others; organisational limitations and common aims. The researchers found that students from conventional complementary health disciplines expressed that interaction is key in breaking down prejudices and creating common aims. They also pointed out however that mutual stereo typing between nurses and midwives was more challenging to overcome as it was much more entrenched. They observed that nurses adopted the more subservient position in the case study scenario, and recommended further research be carried out into ways that mutual respect achieved through IPE can lead to a more seamless and holistic health service.

Discussion

The themes that have emerged from the literature centre around the timing and relevance of IPE teaching within undergraduate healthcare programmes, as well as the importance of professional identity and the impact this has on the other professions

It may be suggested that by introducing an interprofessional education module early in the programme, as it is in the case here, students have not yet had an opportunity to develop their professional identity (Rogers, 2010). Coster et al (2008) cited that having a professional identity allows students to think, behave and feel like a member of their profession and that this sense of professional identity is strong at the beginning of their pre-registration programme. Adams et al (2006) however, suggested that students' sense of professional identity may be well established prior to the commencement of their training, perhaps due to images of health professionals in the media and this positive attitude should be taken advantage of when implementing IPE. Rogers (2010) asserted that this professional identity is essential to prevent insecurity, which can negatively impact on multi-professional team interactions. Sterett et al (2015) pointed out however that a uni-professional identity can give rise to students viewing their profession as different and better than others. This can lead to resistance to IPE (Murray-Davis et al, 2011). Coster et al (2008) pointed out that conflicts in power relationships can arise from differences in culture, educational requirements, philosophy and status as well as the different structures in health and social care organisations. Freeth (2014) asserted that all professional groups involved in interprofessional education should have equal status, and the differences and similarities within the group should be acknowledged.

Worryingly, the attitudes and stereotypes of faculty members affects the successful implementation of IPE, with the learning process undermined by academics who show preference toward their own professions (Sunguya et al, 2014). These stereotypical views may be the result of professional identity and can create conflicts, tensions and emotions amongst both academics and students (Atwal, 2018). The inconsistent approach to IPE calls into question the value of IPE school wide and warrants a coordinated approach at curriculum-level in order to involve all disciplines (Hood et al, 2014). Sunguya et al (2014) advocated the development of shared values and clarity in the expected outcomes in order to overcome some of the inconsistencies in approach. In their study, Sterrett et al (2015) the faculty established interprofessional communities that the students would remain in for the duration of the programme. The competencies for collaboration and teamwork were developed by students through social interactions and forming and fostering relationships with students from other disciplines.

Alongside IPE, in the early part of the undergraduate midwifery programme, the curriculum centres around the role of the midwife in supporting the normal physiological processes relating to pregnancy and birth, which are assessed and managed by midwives as experts in normality. The introduction of the IPE module at this point may be a source of confusion to student midwives as to the relevance of involving other professionals. Indeed, Rogers (2010) discovered in her study, that student midwives found socializing into their professional identity a challenge, due to the perception of subservience of midwives to the medical model of care whilst learning the definition of a midwife as an autonomous, holistic practitioner, who is expert in normality.

Professional identity in midwifery, it may be argued, is somewhat disjointed at present, possibly, because as Hansson et al (2018) stated that there has been a paradigm shift in midwifery over time. Moving from a situation where midwives have been autonomous practitioners, having responsibility for women experiencing normal pregnancy and birth at home to our current position where childbirth has moved into labour wards, into the domain of medical science where problems and complications have become the focus and midwives work as part of an interprofessional team (Hansson et al, 2018). In addition, the expansion of midwifery support worker roles has altered the core skills and boundaries of the profession (Smith, 2014). This culture shift has been one of the drivers for the introduction of IPE to undergraduate programmes (Hansson et al, 2018).

In their work, Roberts et al (2018) examined the relationship between the perceived relevance of IPE and professional identity, indeed this was also highlighted in the study conducted by Murry-Davis et al (2011) as conflicting views were expressed by clinically based midwives and midwifery educators, with clinical midwives expressing scepticism about the implications for practice. Roberts et al (2018) stated that this may be due to the perceived relevance of IPE to participants' future careers, and that it is an academic exercise rather than a key competency (Murray-Davis et al, 2011). Freeth (2014) cited that, like professional education, interprofessional education should encompass a range of formally planned and opportune experiences that continually modify knowledge and skills by a process of trying things out and reflection. Students and clinical midwives may feel that interprofessional education is more relevant if, alongside formally planned IPE activities, academic value is placed on their work-based, interprofessional interactions through formally assessed reflection.

Student midwives, like most healthcare students spend at least 50% of their programme in clinical practice, this enables them to learn through the integration of the formal education they receive in the university and actual experience (Kaufman and Mann, 2014). Morris and Blaney (2014) highlighted that the informal learning, that typically takes place in the workplace has routinely been viewed as opportunistic, haphazard and lacking any process, structure and educational rigour. In contrast, formal learning is typified by a defined curriculum, timetables, aims and objectives. It is often linear, progressive teaching and

assessments. This may explain why IPE strategies are often formally implemented in the university setting, as learning in the workplace, has traditionally been less valued by students and teachers, possibly because it has been directly compared with formal learning, rather than being viewed as being a distinct pedagogy itself (Morris and Blaney, 2014). Freeth (2014) also recognised the importance of informal learning as part of IPE and recommended that more value be given to its contribution.

Traditional learning theories apply largely to the individual learner, they do not acknowledge the influence of the workplace, its history, practices and culture can have on learning (Nisbet et al, (2013). Several theories exist that underpin workplace-based learning, specifically, these relate to behavioural, cognitive and socio-cultural conceptions of learning (Morris and Blaney, 2014). Particularly relevant to IPE, is the notion of situated learning, this theory is one of those that underpins medical education, it has a socio-cultural basis, and views learning and development as arising through participation in activities of a Community of Practice (CoP) (Kaufmann and Mann, 2014). Sterrett et al (2015) defined a CoP as a social learning theory and conceptual model developed by Jean Lave and Etienne Wenger. The basic principle is that learning occurs when people participate in the activities and practices of social communities and construct identities in relation to them. The success of a CoP is dependent on the following five elements; the sharing of a common goal, the existence and use of knowledge to achieve that goal, the importance of the relationships formed among community members, the relationships with those outside of the CoP and the relationship between the work of the CoP and the value of the activity (Wenger, 1998). Which, it may be suggested broadly align with the principles of interprofessional education; improvement of the quality of care, focussed on the needs of service users, encourages participants to learn from, with and about each other, respects the integrity and contribution of each profession, enhances practice within professions and increases personal satisfaction (CAIPE, 2017).

Using CoP as an educational model could alleviate some of the perceived barriers to formal IPE, as it is applicable to both undergraduate students and qualified staff. It acknowledges how 'work' is a place for socialisation, social interaction, identity formation of professional roles, where these interpersonal relationships, power, status and authority are all part of the dynamic in the workplace (Morris and Blaney, 2014). CoP, however, have been criticised for lacking theoretical grounds and being simplistic, which Nisbet et al (2013) acknowledged were entirely relevant to the interprofessional workplace. They went on to assert however that components from CoP can be integrated into the interprofessional workplace by increasing the emphasis on learning through everyday practice. Morris and Blaney (2014) agreed with this, stating that learning opportunities that arise in everyday work should be explicitly labelled and learners are encouraged to articulate, reflect upon and discuss differences in culture and consider why this may be the case.

Nisbet et al (2013) highlighted that it is difficult to separate the concepts of interprofessional working and interprofessional learning and by introducing the concept of CoP into IPE for undergraduates on healthcare programmes it may give rise to the creation of interprofessional learning organisations. Murray-Davis et al (2014) demonstrated the importance of this in their study, where students were taught a formal, university-based IPE module. Students had only realised the benefits of the IPE upon graduation and they have not developed the skills necessary for interprofessional collaboration as a result of the IPE. In addition, following qualification, they find themselves surrounded by colleagues who do not place the same value on interprofessional working and learning (Murray-Davis et al, 2011).

This situation poses a challenge for IPE curriculum designers, as frequently, IPE is based on a traditional model of teaching that is focussed on the communication of knowledge and the emphasis is on measurable outputs of learning such as skills, attitudes and knowledge (Morris and Blaney, 2014) they go on to assert that by applying the same principles to work-based learning, the learning itself is devalued and the focus in on the outcome, rather than the learning. Freeth (2014) questioned whether IPE should be assessed at all as the process and engagement in the IPE is arguably more important. She goes on to point out however that if IPE is not assessed, this can lead to the perception that is of less value than other modules, leading to lack of engagement and non-attendance.

Conclusion

Interprofessional practice is inevitable in the multi-professional, 21stcentury health care system in which we find ourselves, driven by the pace of change and the perception of fragmentation within the health service. IPE has been included in undergraduate programmes in healthcare disciplines, with the aim of improving the effectiveness of teamworking and communication. Atwal (2018) stated that there is a widespread assumption that interprofessional teams are beneficial for all types of patients, but the evidence to support this is 'remarkably slim'. Planning and delivering effective IPE is challenging, for numerous reasons, some of which have been explored in this article, such as professional identity, the ideal timing of IPE in the programme as well as the perception of its relevance to students. There are also a number of administrative and logistical barriers to effective IPE such as timetabling clashes, room capacities and shift patterns, which present challenges for facilitators of IPE to overcome.

The notion that the professional identity and the principles underpinning midwifery practice can create a barrier to student midwives engaging with IPE has been analysed. There is little evidence available that explores the relationship between these phenomena and would be valuable in identifying the underlying issues, and therefore enabling solutions to be offered. The professional identity of student midwives as well as students from other disciplines should be considered by IPE facilitators as a potential barrier to engagement. The relevance of IPE has been questioned by some midwifery participants and this has been examined in this article in relation to its applicability following registration. The introduction of IPE that adds value to the work-based learning that students experience has been explored. The communities of practice model of IPE could enable students, clinicians and academics to work closely together to improve the clinical learning environment, as a significant number of trusts that have been included in the research lacked the supportive infrastructure required to promote the IPE agenda either pre-registration or following qualification (Murray-Davis et al, 2014).

As an academic, this article has challenged my assumptions regarding interprofessional working and IPE. It has made me reconsider my own views on IPE. I believe that the communities of practice model offers a viable framework to implementing work-based IPE. I appreciate that there are a number of obstacles to overcome in the planning and implementation; not least obtaining support from academics from other disciplines and clinical practice sites. I am committed to developing a detailed knowledge of other health and social care disciplines as suggested by Atwal (2018) and I am realistic about the volume and quality of research around IPE, but I believe in the rhetoric, that well planned and facilitated IPE can lead to improvements in outcomes for women in our care, there just isn't any good quality evidence for it...yet.

References

Adams, K, Hearn, S, Sturgis, P, Macleod Clark, J (2006) Investigating the factors influencing professional identity of first year health and social care students. *Learning in Health and Social Care*. **5** 2) 55-68

Anderson, G, Hughes, C, Patterson, D and Costa, J (2017) Enhancing interprofessional education through low-fidelity simulation. *British Journal of Midwifery* **25** (1) 52-58

Atwal, A (2018) Interprofessional learning interventions: championing a lost cause? *British Medical Journal*. **21** (2)

Bradfield, Z, Duggan, R, Hauck, Y and Kelly, M (2018) Midwives being 'with woman': An integrative review. Women and Birth **31** 143-152

Centre for the Advancement of Interprofessional Education (2017) *Interprofessional Education Guidelines*. CAIPE. London

Coster, S, Norman, I, Murrells, T, Kitchen, S, Meerabeau, E, Sooboodoo, E and D'Avray, L (2008) Interprofessional attitudes amongst undergraduate students in the health professions: A longitudinal questionnaire survey. *International Journal of Nursing Studies*. **45** 1667-1681

Francis, R (2013) *Report of the Mid-Staffordshire NHS Foundation Trust Public Enquiry*. London. The Stationary Office

Freeth, D (2014) Interprofessional Education In Swanwick, T (ed) Understanding Medical Education: Evidence, Theory and Practice 2nd Edition. Wiley Blackwell. Chichester 81-96

Hansson, M, Lundgren, I, Hensing, G and Carlsson, I (2018) Veiled midwifery in the baby factory – A grounded theory study.

Hood, K, Cant, R, Baulch, J, Gilbee, A, Leech, M, Anderson, A and Davies, K (2014) Prior experience of interprofessional learning enhances undergraduate nursing and healthcare students' professional identity and attitudes to teamwork. *Nurse Education in Practice*. **14** 117-122

International Confederation of Midwives (2011) *ICM Definition of the Midwife*. ICM. The Hague

Kaufmann, D and Mann, K (2014) Teaching and learning in medical education: how theory can inform practice In Swanwick, T (ed) Understanding Medical Education: Evidence, Theory and Practice 2nd Edition. Wiley Blackwell. Chichester 7-27

Kirkup, B (2015) The report of the Morecambe Bay Investigation.

Lockeman, K, Appelbaum, N, Dow, A, Orr, S, Huff, S, Hogan, C and Queen, B (2017) The effect of an interprofessional simulation-based education program on perceptions and stereotypes of nursing and medical students: A quasi-experimental study. *Nurse Education Today.* **58** 32-37

Morris, C and Blaney, D (2014) Work based learning <u>In</u> Swanwick, T <u>(ed)</u> Understanding Medical Education: Evidence, Theory and Practice 2nd Edition. Wiley Blackwell. Chichester 97-109

Murray-Davis, B, Marshall, M and Gordon, F (2011) What do Midwives think about interprofessional working and learning? *Midwifery*. **27** 376-381

Murray-Davis, B Marshall, M and Gordon, F (2014) Becoming an interprofessional practitioner: factors promoting the application of pre-qualification learning to professional practice in maternity care. *Journal of Interprofessional Care.* **28** (1) 8-14

Nasir, J, Goldie, J, Little, A, Banerjee, D and Reeves, S (2017) Case-based interprofessional learning for undergraduate healthcare professionals in the clinical setting. *Journal of Interprofessional Care.* **31** (1) 125-128

National Maternity Review. (2016). *BETTER BIRTHS, Improving outcomes of maternity services in England*.

Netherwood, M and Derham, R (2014) Interprofessional education: merging nursing, midwifery and CAM. *British Journal of Nursing*. **23** (13) 740-743

Nisbet, G, Lincoln, M and Dunn, S (2013) Informal interprofessional learning: an untapped opportunity for learning and change within the workplace. *Journal of Interprofessional Care* **27** (6) 469-475

Nursing and Midwifery Council (2015) (updated, 2018) The Code. NMC. London

O'Neill, O (2008) Safe Maternity Teams. Safe Births: Everybody's Business. An Independent Inquiry into Maternity Services in England. Kings Fund. London

Roberts, L.D, Davis, M.C, Radley-Crabb H.G and Broughton, M (2018) Perceived relevance mediates the relationship between professional identity and attitudes towards interprofessional education in the first-year university students. *Journal of Interprofessional Care.* **32** (1) 33-40

Rogers, K (2010) Exploring the learning experiences of final-year midwifery students. *British Journal of Midwifery*. **18** (7) 457-463

Smith, J (2014) Healthcare system reform and professional identity. *British Journal of Midwifery*. **22** (6) 388-389

Sterrett, S, Hawkins, S, Hertweck, M and Schreiber, J (2015) Developing communities of interprofessional practice: Using a communities of practice framework for interprofessional education. *Nurse Educator.* **40** (1) E1-E4

Sunguya, B, Hinthong, W, Jimba, M and Yasuoka, J (2014) Interprofessional education for whom? – challenges and lessons learned from its implementation in developed countries and their application in developing countries: A systematic review.**9** (5) 1-17

Wenger, J (1998) *Communities of Practice: Learning, Meaning and Identity* Cambridge. Cambridge University Press.

Transition, Decoding and Heutagogy; A strategy for improving undergraduate learning in sport, health and exercise

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Abstract:

Heutagogy, an established concept in educational literature, puts an emphasis on the development of a student's ability to understand how they learn certain skills and abilities.

To gain a clearer understanding on the implementation of heutagogy within the higher education environment, the present study considered the adoption of heutagogical approaches with students at University. A review of the literature was conducted to understand the use of pedagogy and andragogy in higher education and how a heutagogical approach could create a self-directed learning experience. Contemporary research has evidenced that the implementation of heutagogy at higher education encourages students to develop highly employable skills such as determination and initiative. In contrast, it has been discovered that students find heutagogy to be challenging, therefore a progressive development from pedagogy to andragogy to heutagogy is required. Nevertheless, the beneficial outcomes are apparent to educators and students, and increase employability rates. The beneficial learning outcomes of heutagogical learning such as employability and self-directed learning is discussed.

1.0 Introduction:

In the modern society, educators are tasked with the development of lifelong learners with the ability to thrive in an ever-changing complex world. Thus, pedagogical methods are seen to be unsuitable for preparing learners for the modern workplace (Blaschke, 2012). It is suggested that a more self-determined and self-directed approach is required to enable the learners to understand how they have learnt a skill and to what extent an educator has taught them how to teach themselves (Kamenetz, 2010; Peters, 2004). With a similar opinion of andragogical education it seems a new pedagogical approach is required to utilise new teaching methods, learning resources and technology (Blaschke, 2012). Bhoyrub et al, (2010) also recognise the need for an updated approach aimed at students in higher education which could develop an autonomous learner.

In response to the revolution of teaching theory in higher education (Hennissen, Beckers & Moerkerke, 2017) the concept of heutagogy offers particular principles and practices which puts an emphasis on the development of a student's capability and capacity to learn

(Bhoyrub et al., 2010). Heutagogy has been defined as the study of self-determined learning (Hase & Kenyon, 2000) and has also been identified as a holistic approach which develops a learner's capabilities by making learning a proactive process (Blaschke, 2018). In addition, Hase and Kenyon (2007) suggest that heutagogical learners serve as "the major agent in their own learning, which occurs as a result of personal experience" (p.112) thus indicating that the modern-day student must take an element of ownership within their studies by becoming self-directed and self-determined.

Heutagogy has been praised for containing particular attributes such as autonomy and selfdirectedness (Blaschke, 2012) and is of particular interest with distance learning and education. Whereas pedagogy refers to the methods of practice and teaching as an academic subject at a lower level of maturity (Richardson, Byrne, & Liang, 2018) and andragogy transfers this practice to facilitate adult education (Canning, 2010). Blaschke (2016) recognises that self-determination is a key characteristic of distance education, thus, heutagogical education seeks to enable a self-directed approach to student development (Hase & Kenyon, 2001). As we consider the modern society, it is becoming increasingly important that graduates possess attributes such as; self-awareness, confidence, decision making skills, adaptability, problem solving and initiative (Jorre de St Jorre & Oliver, 2018) which all link to independence and the ability to think autonomously. Interestingly, proven benefits of heutagogical education such as self-determination, self-directedness and autonomous education all relate to the modern requisite of graduate employability (Blaschke, 2012, 2018; Hase & Kenyon, 2001).

In recent years there has been an evident shift within higher education which has directed academics and educators to an overly nourishing approach to learning (Nkuyubwatsi, 2016). Interestingly, research by Berger and Wild (2017) and Canning (2010) has also identified that 'spoon-feeding' students throughout their first year at University can have a negative effect on the rest of their undergraduate degree. Price (2014) identified that student autonomy is a developmental journey which requires a minor redundancy from the educator at the start of the learner journey. In relation, heutagogy has been recognised as a scaffolding procedure which gives the learner or practitioner a safe environment to make independent mistakes (Blaschke, 2018). It is understood that the learner eventually develops the ability to autonomously make decisions and increase their own capacity to learn. The purpose of this paper is to discover whether the implementation of heutagogical practice in higher education has the potential to improve the students' educational journey by creating self-directed and self-determined learners.

2.0 Research Methods:

This paper offers an extensive review of the previous and current research available on the practices and outcomes of heutagogy. In approaching the research, the author sought to establish the identified benefits of adopting a heutagogical approach in higher education

whilst discovering whether the student learner journey is then negatively affected by overnourishing at Level Four. By reviewing current heutagogical literature and practice the author has used the pedagogical theory of Decoding the Disciplines (Pace, 2017) in an attempt to identify how heutagogy can be adopted and used in practice as an educator. A review of the literature initially defines pedagogy, andragogy and heutagogy, describing the connection of the three established educational concepts. This paper provides a basis for further research into heutagogy as a tool for student development in higher education.

3.0 Pedagogy:

Defined by the English Oxford dictionary as "the method and practice of teaching, especially as an academic subject or theoretical concept", pedagogy is the discipline which helps us understand how the theory and practice of teaching can influence student learning (Richardson, Byrne, & Liang, 2018). Pedagogy refers to teacher interactions and the social environment established by the educator (Dyson, Griffin, & Hastie, 2004). Pedagogic research aims to enhance human potential through the acquisition of specific skills.

Although pedagogy is defined as the practice and profession of teaching (Toetenel & Rienties, 2016), academics are now using this term to specifically describe children's learning (Blaschke, 2012) as the word 'Peda' originated in the Greek language and means child-leading. With a recent focus on the teaching techniques within higher education, an adult centred learning discipline was required (Hase & Kenyon, 2001), andragogy offered academics commonalities of theory and practice which also related to the education of adult learners.

4.0 Andragogy:

The literature has demonstrated that students may learn more and benefit from choosing their own case scenarios around which to base simulation activities (Valler-Jones, 2014; Baile and Blatner, 2014). Case studies are often used in many fields of higher education, particularly in business and management schools, as a way of creating real life situations to enable the students to develop employability skills (Fry et al, 2015, pp333). This concept is easily transferrable into nursing practice allowing students to "play out" clinical scenarios and think about how they would manage them in a practice setting, developing effective communication skills. As final year students, these skills may be of great benefit when attending job interviews. This approach would also empower students, and give them some autonomy over simulation style education, which has proven to be an effective approach when working with adult learners (Knowles, 1975, cited in Fry et al, 2015). However, this style of learning may not suit some students; cultural influences may mean some students feel uncomfortable with this style of learning or may view a case scenario differently because of their cultural background (Frambach et al, 2014; Levitt, 2016). Equally, those students who are quieter and do not engage as readily in the classroom, may feel excluded

if they find learning in this way a challenge, (Collins & Ting, 2010). Therefore, adequate preparation of students is vital to the success of simulation sessions. It should be considered that this is likely to increase preparation time for the lecturer and will need careful facilitation to ensure students are able to come forward with suggested scenarios. Care should also be taken to ensure patient and staff confidentiality when using "real-life" scenarios so the lecturer would need to set clear ground rules with students (NMC, 2015).

Alongside giving students the option to develop their own case scenarios for simulation training, the literature suggests that adequate preparation of the students is key to the success of the activities (Baile and Blatner, 2014; Warland, 2010). Some students may find this style of learning activity daunting, whilst others may embrace the opportunity to learn through practical experience. However, by adequate preparation, and consideration of which roles students may choose to play during the activity, there is opportunity to support learning for all students, regardless of their preferred learning style (Tutticci et al, 2016). Quieter learners or those who prefer to reflect on experience may learn better from taking on the role of observer during such activities (Honey and Mumford, 1986).

Several studies have used video-recording of simulation activities to use after the session to aid debriefing (Burden et al, 2014; Valler-Jones, 2014). This may be of benefit, not only to assist in debriefing, but also could be a valuable learning tool for students to revisit after the session. Debriefing after simulation activities is key for several reasons. It enables students the opportunity to come out of "role", and to pause and reflect on the situation (Warland, 2010). For simulation activities to be effective, it is important for students to be able to share thoughts, think about what worked well and what might be improved upon, and what they have learned for the session (Warland, 2010; Lavoie and Clark, 2017). Using a structured reflective model, such as Rolfe (2011), which asks "what", "so what", and "now what", may be of benefit to aid effective debriefing.

Three of the research studies reviewed demonstrated a reduction in student anxiety and increased confidence prior to practice placements following a simulation activity (Khalaila, 2014; Hope et al, 2010; Warland, 2010). This must be seen as a positive impact for the students, the lecturers and the university. When students go out to practice placements they are representing the University of Hertfordshire, which is an important factor. Enhanced communication skills when working with patients and families continues to be a high priority in healthcare (NHS England, 2012). Multiprofessional simulation exercises, which include nurses alongside other health professionals, have also been shown to increase confidence in communication skills, and therefore improve patient outcomes and quality of care (Truijens et al, 2015; Donovan et al, 2003; Ross et al, 2015). Therefore, providing simulation training that increases student confidence has to be a positive thing.

5.0 Heutagogy:

The literature suggests that using a more structured approach to simulation exercises for third year student nurses during their final practice module would be of benefit. Engaging with the students in terms of preparation for simulation activities appears to be key. For example, asking students to agree on case scenarios that could be used for simulation, particularly considering situations where they have experienced difficulties in communication or witnessed the difficulties of others. Alongside adequate preparation comes the need to create an environment whereby students to play all parts in a simulation exercise can have a positive impact on the experience; and could make the exercises less labour intensive for the teaching team, as fewer facilitators would be required. However, the facilitators would need to be very skilled and adequately prepared to be able to support the students to undertake all roles within simulation and additional time may be required to prepare the students in advance of the sessions.

The literature has also stressed the benefits of structured feedback following simulation sessions. Currently, there is limited time for this built into the sessions that are timetabled; but using a debriefing approach would allow the students to be able to clearly demonstrate their learning from the scenario-based simulation sessions and consider how they might be able to develop their communication skills to support the completion of their final management placement in practice. This may be facilitated by recording of the scenario activities and playing them back to prompt discussion. It may also support future employment, by improving skills required to be demonstrated in an interview situation.

Moving forward it might appear sensible to try and measure the impact of these sessions. This could be achieved by assessing students' confidence in communication skills prior to the simulation session, after the debriefing exercise, and at the end of their final management placement (three months later) to see whether the knowledge gained has been lasting and well applied in the practice setting. This would enable the lecturing team to effectively evaluate the learning gained from simulation activities. It would also demonstrate a commitment to the public, giving high priority to the development of effective communication skills amongst newly qualified nurses.

It is likely that simulation style learning activities and effective communication skills will continue to be high priority when the new Standards for Nurse Education (NMC, 2018) are published by the NMC in a few months' time. Therefore, it is imperative that further consideration is given to this style of teaching to ensure final year nursing students develop the best possible communication skills to support their practice.

6.0 Commonalities and Differential Aspects of Pedagogy, Andragogy and Heutagogy:

Pedagogy, Andragogy, Heutagogy compared.

Heutagogy: The management of self-managed learners

	Pedagogy Children's learning	Andragogy Adults learning	Heutagogy Self-directed learning
Dependence	The learner is a dependent personality. Teacher determines what, how and when anything is learned.	Adults are independent. They strive for autonomy and self-direction in learning.	Learners are interdependent. They identify the potential to learn from novel experiences as a matter of course. They are able to manage their own learning.
Resources for learning	The learner has few resources – the teacher devises transmission techniques to store knowledge in the learner's head.	Adults use their own and other's experience.	Teacher provides some resources but the learner decides the path by negotiating the learning.
Reasons for earning	Learn in order to advance to the next stage.	Adults learn when they experience a need to know or to perform more effectively.	Learning is not necessarily planned or linear. Learning is not necessarily based on need but on the identification of the potential to learn in novel situations.
Focus of earning	Learning is subject centred, focussed on prescribed curriculum and planned sequences according to the logic of the subject matter.	Adult learning is task or problem centred.	Learners can go beyond problem solving by enabling pro-activity. Learners use their own and others' experiences and internal processes such as reflection, environmental scanning, experience, interaction with others, and pro-active as well as problem-solving behaviours.
Motivation	Motivation comes from external sources – usually parents, teachers and a sense of competition.	Motivation stems from internal sources – the increased self-esteem, confidence and recognition that come from successful performance.	Self-efficacy, knowing how to learn, creativity, ability to use these qualities in novel as well as familiar situations and working with others.
Role of the teacher	Designs the learning process, imposes material, is assumed to know best.	Enabler or facilitator, climate of collaboration, respect and openness.	Develop the learner's capability. Capable people: * • Know how to learn • Are creative • Have a high degree of self-efficacy • Apply competencies in novel as well as familiar situations • Can work well with others

Figure 1: The difference between pedagogy, and ragogy and heutagogy (taken from Heick, 2018).

It is understood that the progressive link between all three of the 'gogies' enables learners to become active and then proactive in identifying how their learning needs will be met. Heutagogy is a form of self-determined learning where learners are highly autonomous and well prepared for the demands of dynamic complexity (Blaschke, 2018). It could be conceived from the continuum of 'gogies' that higher level learners who are more experienced and take greater responsibility for their own development will require less instructor control and more freedom or flexibility in course structuring. Canning (2010) suggests that students should be encouraged to develop learner maturity and self-reliance, however this can be affected if dependency and being directed by educators is within the course requirements (Bhoyrub et al., 2010) for example, professional nursing degrees. Figure 1 contrasts the different dependencies, resources, reasons, motivations and roles of the educator in each of the three approaches. There is a clear shift from instructing students to learn, to facilitating students to understand how they learn but also, how the learner progressively sets the learning agenda more, which develops their own learning and identity (Heick, 2018). Figure 1 clearly displays that a progressive redundancy of teaching resources and the educator creates a richer focus and motivation for the students within the heutagogical learning environment. It is clear that heutagogy tends to develop capabilities rather than competencies (Price, 2014), and learners who are appropriately equipped for the complexities of the modern workplace (Toetenel & Rienties, 2016). Interestingly Kale and Singh (2007) describe capabilities as the capacity of learners to use competence in familiar, unfamiliar and changing situations. It can be criticised that grouping all child learning into pedagogy is inappropriate as education is varied between the ages of three and eighteen. Heick (2018) accepts this notion but acknowledges that child, and therefore pedagogic learning does encompass teacher-led education and is focussed on the progression of curricular requirements. When linking to Blaschke (2016) it is clear that learning is most effective when educators allow students to react to evolving circumstances, it could be suggested that the progression from pedagogy to heutagogy (as seen in Figure 1) facilitates this educational adaption.

7.0 Decoding the Disciplines:

Middendorf and Pace (2004a) define decoding the disciplines as the process of increasing student learning by tightening the gap between thinking as a novice and an expert. As seen in Figure 2, this theoretical model begins by identifying the 'bottlenecks' to learning, otherwise known as implications in the learning process (Sundt, 2010). This model then progresses by educators and specialists facilitating the models and practices required to overcome that particular implication. Interestingly, the review phases of this model are divided between an assessment of the student's mastery followed by the distribution of new knowledge (i.e. sharing experiences) with colleagues (Currie, 2017). Figure 2 is an adaption from the work by Middendorf and Pace (2004a) to better understand where a heutagogical approach can be implemented when educating students in higher education. As suggested by Blaschke (2018), the educator must first establish an area within the student's ability which requires attention before creating an appropriate task, this would be associated with the first three elements of Figure 2. Interestingly, this also links to the zone of proximal development (Vygotsky, 1980) as students cannot complete these tasks unaided, but can complete them with some guidance (Eun, 2017). Within the zone of proximal development, students are required to seek support before working autonomously. The fourth, fifth and sixth element of Figure 2 relates to the educator implementing a redundancy within the situation in order to allow the student to adopt a level of self-dependency. Finally, the educator and the student would distribute the acquired knowledge during this experience. Interestingly Bhoyrub et al. (2010) express that a circulation of what has been discovered during a self-directed experience gives the participant an additional opportunity to take control of their own learning. Pace (2017) also

acknowledges that considering the many ways we could share our results from the decoding process gives the educator another opportunity to decode and reflect upon the practice that has been undertaken.



Figure 2: The Decoding the Disciplines Wheel. Adapted from Middendorf and Pace (2004a).

8.0 Discussion:

8.1 The Benefits of Heutagogical Learning

Until recently, there has been a lack of empirical evidence to suggest that a scaffolded learning practice for students is a beneficial approach to improving a student's educational capability (Price, 2014). Contemporary research has demonstrated a demand from employers, academics and even students which suggests that independency as a student is unique but valuable (Blaschke & Hase, 2016; Richardson et al., 2018; Sin & Amaral, 2017). However, Wood and Su (2017) have suggested that millennia students are blind and ignorant to the value of self-determination. Similar remarks are made by Nkuyubwatsi (2016) who suggests students are becoming more dependant.

Furthermore, Jorre de St Jorre and Oliver (2018) state that modern students as consumers demand more from their tuition fees, which involves nourishment and 'spoon-feeding' (Nkuyubwatsi, 2016) suggesting that students are ignorant to the importance of working autonomously towards their degree. Moving forward, Cassidy (2006) identifies a number of 'non-technical skills' which refer to common employability skills. These skills are; "learning skills, strategy, problem solving, decision making, dependency and responsibility, self-discipline, self-management and the ability to work without supervision." (Cotton, 2001.

Cited in Cassidy, 2006. p.509). Interestingly, when linking to a heutagogical perspective, Blaschke (2012) identifies that learners can become self-disciplined and self-directed by adopting responsibility and problem-solving traits, from working without supervision. It is clear here that giving students the ability to work autonomously gives them the opportunity to develop essential skills which are required by employers. It could be suggested that as an educator, you are having a negative effect on your students by over nourishing their learning journey (Andrewartha & Harvey, 2017).

8.2 Over Scaffolding and Removing Self-Determination

Contemporary research has identified that an over nourishment of students has a shortterm benefit of success (Jorre de St Jorre & Oliver, 2018) with a long-term issue of dependency and an incapability of making decisions (Cassidy, 2006). By adopting a heutagogical approach to education and therefore accepting a temporary redundancy as the instructor towards a learning experience will provide students with unique, but employable attributes (Berger & Wild, 2017). As discussed previously, millennial students are ignorant to the long-term benefits of autonomous learning (Wood & Su, 2017) thus, it is important for the educator to understand the importance of producing scaffolded tasks for learners rather than over nourishing. Furthermore, from an employer's perspective, Chhinzer and Russo (2018) state, in order to create an employable student, educators must create a learning environment which enables the students to make decisions and solve problems individually or as a team. However, recent evidence has revealed that higher education students have become consumers and expect 'value for money' in terms of support with their studies (Bunce, Baird, & Jones, 2017). With this in mind, academics and educators must offer a level of support which additionally alleviates the student's ability to develop their ability to work without supervision. Empirical research has identified that heutagogy and therefore a self-directedness to learning has the ability to develop the student's essential employability skills (Blaschke, 2018), however there has been a dearth of research which establishes a best practice procedure in order to adopt this approach in practice. Moreover, Berger and Wild (2017) suggest there is a breadth of graduates who lack the essential criteria to become employable. Therefore, the importance of adopting a heutagogical approach to education is becoming more significant.

8.3 Heutagogy in Practice; The Transition

When linking heutagogy to practice, Figure 2 demonstrates seven essential steps which supports an educator attempting to scaffold their students learning. In the first phase, the educator must establish a 'bottleneck', described by Miller-Young and Boman (2017) as something the student briefly understands but cannot conduct perpetually. An example of this may be referencing. The educator's student has the ability to understand what referencing is but is unable to reference to a sophisticated standard. The second phase requires the educator to discover the mental task associated with this bottleneck. Explained

by Middendorf and Pace (2004b) as the hidden operations which an expert would conduct automatically, this requires the ability to question what you would do as the expert in order to understand the tacit knowledge from a learner's perspective. In relation to the current example, the educator must consider what step-by-step tasks are subconsciously completed in order to reference correctly. The educator and the student work together in the third stage by designing and modelling essential tasks to gain a greater understanding of the selected bottleneck. Pinnow (2016) describes the third stage as the educator's ability to show the student what they are required to do in order to complete the task. However, with heutagogy in mind, this third stage gives the student and the educator the ability to jointly design a model to develop the student's ability. When also considering Vygotsky's zone of proximal development (Vygotsky, 1980), there are some steps within the progressive stages where the students' needs some help from the educator in order to complete the task and progress autonomously (Eun, 2017). In this example, the educator would discuss the subjects referencing guide with the student to establish where the student is currently making consistent errors. It is important to allow the student to discover and then learn from their own mistakes (Price, 2014).

The fourth stage of Figure 2 relates to the educator's opportunity to set a task and provide feedback on the process (Middendorf, 2004). In relation to the current example, the educator at this point could create a formative task for the student which requires a minimum of three references, once submitted, feedback can be given on the identified bottleneck. When linking with heutagogy, the fifth stage becomes increasingly important. The level of motivation and support given to the student is the difference between autonomy and dependency (Nkuyubwatsi, 2016). As explained by Sundt (2010), the fifth stage of the model questions how you can motivate your learners, what is required to happen in order to address the affective side of learning? When linking with Vygotsky's zone of proximal development (Vygotsky, 1980), it is essential at this point that students begin to move towards what they can do for themselves, rather than seeking further support from their educator. At this stage, the educator will need to assess whether the student requires additional motivation, if this is the case, the educator can direct the student to the resources required without answering the questions addressed. The sixth stage of this model links with an assessment of the student's development and understanding throughout this decoding experience (Huber, 2006). At this stage the educator can link the progress to an assessment and check for the student's ability to reference in a written assignment. The final stage of Figure 2 relates to the distribution of expertise. The circulation of knowledge is an essential part of this model as it gives others the ability to learn from what has been decoded (Pace, 2017). From a heutagogical perspective, in this example the educator would initially discuss the outcomes of the assessment with the learner, and then explore the process with colleagues. Being heutagogical as an educator means a completion of the process by exposing new knowledge with other colleagues (Blaschke, 2012).

9.0 Conclusion:

Since its beginnings in the early 2000's, heutagogy has been identified as an extension from pedagogy and andragogy (Blaschke, 2012) however, until recently has received a limited amount of interest and attention from a higher education perspective. In practice a number of challenges of using a heutagogical approach have been identified such as, academic resistance to change (Blaschke, 2012), fear of redundancy, an increased financial pressure and a continued student focus on assessments (Hase & Kenyon, 2007). Common concern across the higher education sector is the wariness of placing full control of learning into the hands of the student. Whereas, from a student's perspective, there is a concern of disadvantage and a requirement of support (Scager, Akkerman, Pilot, & Wubbels, 2017) however, a shift is now required to alter the learner's attitude in an attempt to add a great emphasis on a scaffolding approach to learning which will develop the learner's autonomy skills. The present work explored the contemporary literature on the beneficial outcomes of developing a heutagogical approach in education. It is clear that employers are demanding more from University graduates and a shift is required by academics to enable their students to adopt the required skills and attributes to achieve employment post-graduation. Blaschke (2018) expresses that current practice within the education sector allows students to fall into a comfort zone where lecturers support the achievement of education. However, there is a breadth of research which evidences that students also require the ability to develop interpersonal and employable skills during their time on a degree (Berger & Wild, 2017). Therefore, educators are required to embrace heutagogy and allow their students to become autonomous thinkers, learners and graduates.

9.1 Future Research Recommendations

When considering emerging pedagogical theories in higher education, additional inquiry and research is required to establish links between heutagogy and other theoretical frameworks. Furthermore, there is a dearth of research which considers what practices and techniques are detrimental in the development of heutagogy in higher education which gives academics the support required to embrace such an approach. Therefore, future research is needed to explore the techniques used in current heutagogical practice in higher education across the United Kingdom.

10.0 Reference List:

Andrewartha, L., & Harvey, A. (2017). 'Employability and student equity in higher education: The role of university careers services'. *Australian Journal of Career Development*. 26(2). pp.71-80.

Berger, D., & Wild, C. (2017). Enhancing student performance and employability through the use of authentic assessment techniques in extra and co-curricular activities (ECCAs)'. *The Law Teacher.* 51(4). pp.428-439.

Bhoyrub, J., Hurley, J., Neilson, G. R., Ramsay, M., & Smith, M. (2010). 'Heutagogy: An alternative practice-based learning approach'. *Nurse education in practice*. 10(6). pp.322-326.

Blaschke, L. M. (2012). 'Heutagogy and lifelong learning: A review of heutagogical practice and self-determined learning'. *The International Review of Research in Open and Distributed Learning*. 13(1). pp.56-71.

Blaschke, L. M. (2016). 'Self-determined learning: Designing for heutagogic learning environments. Learning, Design, and Technology'. *An International Compendium of Theory, Research, Practice, and Policy*. 1(1). pp.25-40.

Blaschke, L. M. (2018). Self-determined Learning (Heutagogy) and Digital Media Creating integrated Educational Environments for Developing Lifelong Learning Skills The Digital Turn in Higher Education (pp. 129-140). United States: Springer.

Blaschke, L. M., & Hase, S. (2016). *Heutagogy: a holistic framework for creating twenty-first-century self-determined learners The future of ubiquitous learning* (pp. 25-40). United States: Springer.

Bunce, L., Baird, A., & Jones, S. E. (2017). 'The student-as-consumer approach in higher education and its effects on academic performance'. *Studies in Higher Education*. 42(11). pp.1958-1978.

Canning, N. (2010). 'Playing with heutagogy: Exploring strategies to empower mature learners in higher education'. *Journal of further and Higher Education*. 34(1). pp.59-71.

Cassidy, S. (2006). 'Developing employability skills: Peer assessment in higher education'. *Education+ Training*. 48(7). pp.508-517.

Chhinzer, N., & Russo, A. M. (2018). 'An exploration of employer perceptions of graduate student employability'. *Education+ Training.* 60(1). pp.104-120.

Currie, G. (2017). 'Conscious connections: Phenomenology and decoding the disciplines'. *New directions for teaching and learning.* 17(150). pp.37-48.

Dyson, B., Griffin, L. L., & Hastie, P. (2004). 'Sport education, tactical games, and cooperative learning: Theoretical and pedagogical considerations'. *Quest.* 56(2). pp.226-240.

Eun, B., (2017). 'The zone of proximal development as an overarching concept: A framework for synthesizing Vygotsky's theories'. *Educational Philosophy and Theory*/. pp.1-13.

Hase, S., & Kenyon, C. (2000). From andragogy to heutagogy. London: Ultibase, RMIT.

Hase, S., & Kenyon, C. (2001). 'Moving from andragogy to heutagogy: implications for VET'. *Graduate College of Management Papers*. 1(1). pp.142.

Hase, S., & Kenyon, C. (2007). 'Heutagogy: A child of complexity theory. Complicity'. *An international journal of complexity and education*. 4(1). pp.111-118.

Heick, T. (2018). *The difference between pedagogy, andragogy and heutagogy.* UK: Teach Thought.

Hennissen, P., Beckers, H. and Moerkerke, G., 2017. Linking practice to theory in teacher education: A growth in cognitive structures. *Teaching and Teacher Education*, *63*, pp.314-325.

Huber, M. T. (2006). 'Disciplines, pedagogy, and inquiry-based learning about teaching'. *New directions for teaching and learning*. 6(107). pp.63-72.

Jorre de St Jorre, T., & Oliver, B. (2018). 'Want students to engage? Contextualise graduate learning outcomes and assess for employability'. *Higher Education Research & Development*. 37(1). pp.44-57.

Kale, P., & Singh, H. (2007). 'Building firm capabilities through learning: the role of the alliance learning process in alliance capability and firm-level alliance success'. *Strategic management journal.* 28(10). pp.981-1000.

Kamenetz, A. (2010). *DIY U: Edupunks, edupreneurs, and the coming transformation of higher education*. London: Chelsea Green Publishing.

Middendorf, J. (2004). 'Facilitating a faculty learning community using the decoding the disciplines model'. *New directions for teaching and learning*. 4(98). pp.95-107.

Middendorf, J., & Pace, D. (2004a). 'Decoding the disciplines: A model for helping students learn disciplinary ways of thinking'. *New directions for teaching and learning*. 4(98). pp.1-12.

Middendorf, J., & Pace, D. (2004b). 'Future of decoding the disciplines'. *New directions for teaching and learning*. 4(98). pp.109-110.

Miller-Young, J., & Boman, J. (2017). 'Uncovering ways of thinking, practicing, and being through decoding across disciplines'. *New directions for teaching and learning*. 17(150). pp.19-35.

Nkuyubwatsi, B. (2016). Activating and nurturing the investment of heutagogical resources for equity and quality in self-determined, open, online and distance learning. UK: The Centre for Learning Technologies and Innovation.

Pace, D. (2017). *The Decoding the Disciplines paradigm: Seven steps to increased student learning.* United States: Indiana University Press.

Peters, O. (2004). *Distance Education in Transition: new trends and challenges*. Oldenburg, Germany: Carl von Ossietzky Universität.

Pinnow, E. (2016). 'Decoding the Disciplines: An Approach to Scientific Thinking'. *Psychology Learning & Teaching*. 15(1). pp.94-101.

Price, D. (2014). Heutagogy and social communities of practice: Will self-determined learning rewrite the script for educators. *Experiences in self-determined learning*. pp.111-118.

Rachal, J. R. (2002). 'Andragogy's detectives: A critique of the present and a proposal for the future'. *Adult education quarterly.* 52(3). pp.210-227.

Richardson, G. M., Byrne, L. L., & Liang, L. L. (2018). 'Making learning visible: Developing preservice teachers' pedagogical content knowledge and teaching efficacy beliefs in environmental education'. *Applied Environmental Education & Communication*. 17(1). pp.41-56.

Scager, K., Akkerman, S. F., Pilot, A., & Wubbels, T. (2017). 'Teacher dilemmas in challenging students in higher education'. *Teaching in Higher Education*. 22(3). pp.318-335.

Sin, C., & Amaral, A. (2017). 'Academics' and employers' perceptions about responsibilities for employability and their initiatives towards its development'. *Higher Education*. 73(1). pp.97-111.

Sundt, J. (2010). 'Overcoming student resistance to learning research methods: An approach based on decoding disciplinary thinking'. *Journal of Criminal Justice Education*. 21(3). pp.266-284.

Toetenel, L., & Rienties, B. (2016). 'Analysing 157 learning designs using learning analytic approaches as a means to evaluate the impact of pedagogical decision making'. *British Journal of Educational Technology*. 47(5). pp.981-992.

Vygotsky, L.S., (1980). *Mind in society: The development of higher psychological processes*. United States: Harvard university press.

Wood, M., & Su, F. (2017). 'What makes an excellent lecturer? Academics' perspectives on the discourse of 'teaching excellence'in higher education'. *Teaching in Higher Education*. 22(4). pp.451-466.

HURDLE OR LADDER?: Student experiences of the transition from school to undergraduate history.

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Abstract:

This article examines the learning and subject issues faced by undergraduate history students at the University of Hertfordshire. Based on a survey of L4 and L5 undergraduates who have experienced the transition from school to university history, the research aims to explore the relationship between students and the discipline of history, specifically their perceptions of history learning and teaching, and their preparation for the demands of undergraduate academic work. Informed by literature focused on the relationship between teaching and students' perceptions, the research project is linked to an ongoing process aimed at shaping curriculum development and inform pedagogical practice. Preliminary findings suggest significant differences in the perceptions of students in terms of their preparedness for history undergraduate study and the ways in which they prefer to learn history. The research project's long-term trajectory includes great potential to foster productive collaboration between school and higher education aimed at reducing the barriers to students' transitions to university.

Introduction:

Starting university is widely regarded as a significant step change, the experience of which can have a substantial impact upon students' engagement, motivation, progress and achievement (Ballinger, 2002; Marland, 2003; Booth, 2005; Smith and Hopkins, 2005; Helmsley, 2016). This can be particularly challenging in history because there is no accepted *essential* body of knowledge at either A-Level or higher education which means that students can arrive at university with vastly different experiences and expectations (Hibbert, 2006: 45). The following paper examines the experiences of undergraduates in the transition from school to undergraduate history at the University of Hertfordshire. It aims to build upon previous research in this area carried out in the UK as outlined below in the literature review. My particular interest in this area stems from previous and current professional practice. Recently, I have made a transition myself, from secondary school history teacher, with fourteen years' experience, to university history educator, working with PGCE Secondary students in the School of Education at the University of Hertfordshire

Soon after starting in post, my advice was sought by colleagues in the History Department within the School of Humanities with regards concerns about the engagement and attitudes to learning of history undergraduates in their programme, particularly Level 4 students. These concerns ranged from a perceived lack of preparation and organisation, particularly reading; an apparent reluctance to engage and participate in group work and class discussion; and a concern that students lacked a conceptual understanding of the discipline of history, for example historical interpretations and historiography. Such concerns are not new or untypical of the degree level study of history (Booth, 2006) or in other subject areas (Hargreaves, 1998; Walmsley, 2000; Smith, 2002). We discussed whether these issues were the result of a lack of preparation at school, particularly A-Level history learning and teaching. However, in for all three of these issues, this had not been my experience as a secondary school teacher working with 6th Form pupils who I found to be prepared and willing participants in lessons, required to develop a conceptual understanding of the discipline of history as part of the A-Level history curriculum. The questions arising here were - why the change? Why the difference in attitudes to learning between school and university? What happens in the transition between school and undergraduate history and how could the issues identified be addressed? It was agreed that one way forward would be to examine the experiences of history undergraduates themselves to inform educators how their curriculum and pedagogy could be developed to make this transition less of a hurdle and more of a ladder for their students.

Aims of Study:

The overall focus of the research project is to examine student experiences of history learning and teaching in the transition from school to higher education. In doing so, it has three key aims. The first is to identify what students perceive to be the barriers to their learning during this transition. Specifically, what they enjoy about history and what they find difficult; their preferences for learning and teaching history; what they had wished they had known at the start that they now know; and what advice they would give to A-Level pupils thinking of studying history. The second aim, is to use these experiences to inform and potentially shape curriculum design for undergraduate history at the University of Hertfordshire, as well as a means in which to help colleagues reflect upon and develop their pedagogical practice aimed at making this transition smoother. The third, is a wider aim of using both the process and the results of the research project as a point of discussion for future collaboration between academic history, school history and history education.

Literature Review:

A review of the literature related to student experiences of the transition from school to undergraduate history highlighted a number of key points and areas of interest. The first was a sense amongst both students and lecturers that they were unprepared for the rigour and demands of undergraduate history particularly with regards independent learning, organisation and the breadth and depth of their historical understanding (Hibbert, 2002). Students themselves reported that their experience was very much a sense of 'sink or swim' particularly in the first year of their undergraduate courses (Booth, 2005). In particular, students reported a significant change in the amount and type of reading required they were required to do at undergraduate level in comparison to their A-Level studies level (Hibbert, 2006). This corresponds with Smith and Hopkins (2005) study of 6th Formers studying A-level English perceptions of teaching and learning degree-level English which found that students were less aware and more surprised about the amount of independent learning, lack of contact time, managing expectations and the amount of time spent reading for undergraduate study. Collins (2011), as part of an introductory module on historiography for first year undergraduates at Loughborough University, describes how an assignment was set which required students to analyse the history that they had been taught at school using historiographic concepts learnt in the module. Although the study was small, Collins (2011), argues that it was useful as it enabled students to critically reflect on their own education while developing their own historiographical understanding.

A second key point evident from the literature was the preference of history undergraduates for what can be described as more *traditional* methods of learning and teaching such as lectures and note-taking as opposed to collaborative approaches such as group work and student-led presentations (Hibbert, 2006; Booth and Nicholls, 2005). This is interesting, particularly as there is extensive literature which indicates that this is not the approach used in schools, particularly A-Level history. For example, Hemsley (2016), describes how she put on 21 additional history university preparation classes at lunchtime (for 30 minutes) for her 6th Form students in order to help them develop a better understanding of what undergraduate history was like, increase applications for Oxbridge and develop her pupils all round historical understanding. Chapman (2011), study provides practical guidance on how he developed 6th Form pupils' thinking and ability to evaluate historical interpretations, and White (2011), outlines a comparative approach to the study of revolutions in order to deepen A-Level students historical understanding of the 1979 Iranian Revolution.

The third key point identified was that students identified a significant change in both the depth and breadth of their learning and understanding of history (Collins, 2011; Mansfield, 2018). At university, particular themes or periods in history which were familiar to students from their school experience were studied in much greater depth while at the same time being exposed to new and vastly different areas, for example sexuality and identity, African and Asian history. Furthermore, students reported that there a much greater demand in developing students' conceptual understanding of history particularly with regards source analysis, interpretations, methodologies and historiography. These issues are not unique to history education in the UK. Seixas (2017) highlights how similar demands are faced by students in Germany and North America, although the nature of these demands may vary according to different historical traditions, the fundamental issues remain the same. As a
result, students perceived that the transition from school to undergraduate history was more a hurdle than a ladder (Booth, 2005; Hibbert, 2006). This is intriguing, particularly given the variety and breadth of school history, including a focus on developing school pupils' conceptual understanding of the discipline of history, for example, history teachers development of pupil understanding of secondary sources and historiography even at Key Stage 3/11-14 age range (see Chapman, 2011; Foster, 2011; Watts and Gimson, 2014).

Overall, the literature review reflected the issues that had arisen in the discussions between colleagues in the history department of the University of Hertfordshire and myself which prompted the research project in the first place. The challenges faced by students in making the transition to undergraduate history is more complex than a lack of knowledge, understanding and preparation arising from what and how history was learnt at school. Further investigation is therefore required in order to identify possible actions that can be taken to this transition more of a step up the ladder rather than a hurdle to be overcome.

Research Design and Method:

The initial part of the research project, and focus of this paper, was a questionnaire aimed at collecting quantitative data on University of Hertfordshire undergraduate experiences of the transition to degree level study of history. A questionnaire was chosen as the method in the initial part of the research project to elicit the views of a wide range of students at different levels and, potentially at different stages of their undergraduate studies, in a relatively quick, efficient but valid way (Cohen et al, 2018:471). The questionnaire was designed to be accessible and engaging for all participants by being clearly phrased and relatively short completed within 10 minutes (Newby, 2014). The format and style of questions were developed with this principles in mind and piloted in the previous academic year with University of Hertfordshire history undergraduates. This had the benefit of improving the style, format and order of questions asked in order to make the questionnaire more appealing and accessible to the participating students. As a result of this pilot the questionnaire was structured into four distinct sections - previous study and interest in history; learning preferences and skills developed in undergraduate study; advice that would be given to others about studying history at degree level; and an optional section indicating age/gender and whether the respondent would be interested in further participation in the research project. The rationale for each of these sections was, first, to ascertain the background and previous experiences of studying history prior to undergraduate study. Second, to focus on how respondents learn history at undergraduate level, and their preferences for learning, with the aim of informing pedagogical practice within the history department to help smooth the transition. Third, a focus on - what I now know that I wish I had known at the start of the course - in other words, how could history students be better informed and prepared prior to starting their undergraduate study. However, it is recognised that, even with refinements, the questionnaire would only provide limited and relatively unsophisticated data with regards these three aims and that this is a common

limitation of this method of data collection (Cohen et al, 2018). These limitations will be addressed in the second part of the project, currently being conducted, which involves small focus group interviews of respondents aimed at exploring in more detail the responses generated and data collected from the questionnaire.

The questionnaire was administered in one location and respondents completed the questionnaire using pen and paper. The rationale here was to promote high rates of completion and quality control by ensuring that there were no differences that could affect each student's response, for example in giving instructions and answering questions Newby, 2014:331-332). Other methods of administration were considered, for example, an online survey, but these were rejected on grounds of reliability and response rates. In addition, I wanted to make a clear distinction between the research questionnaire and the frequent online surveys that UH students are asked to complete on a regular basis, for example MFQs and NSS, aiming to avoid 'survey fatigue'. The purpose of the questionnaire was explained in person, with a particular emphasis on participation being voluntary and the option of anonymity. This choice of administration was deliberate, aimed at promoting participation and emphasising the value placed on finding out about students' experiences in studying history. It is also aimed to avoid 'survey fatigue' resulting from a large number of on-line student surveys conducted by the university, for example Module Feedback Questionnaires.

Results & Analysis:

The questionnaire was conducted with a L4 and a L5 undergraduate group towards the end of the first semester. The purpose here was to compare and contrast the responses between the two groups highlighting any potential differences in experiences and perception of the transition to undergraduate history study. Booth (2005) and Hibbert (2006) both highlight how students' perceptions of the transition can change during their undergraduate study. In addition, there is likely to be differences in composition between the two groups. History is taught within the School of Humanities at UH and at L4 students can choose history as one of four options in a wide range of subjects ranging from American Studies to Religious Studies. At L5 students specialise in a specific subject area or would study for a joint honours degree. Therefore, the L5 group is more likely to consist of students who have opted to specialise, or at least part-specialise, in history.

In the L4 group there were 23 respondents and 17 in the L5 group. Of those respondents who stated their gender and age (which was optional), in the L4 group 9 were female, 3 male, and in the L5 group 3 female, 5 male. Across both groups ages ranged from 18 to 22 years except for two respondents in the L4 group who were aged 40-49 years. Seven respondents in the L4 group expressed an interest in participating in the next stage of the research but none in the L5 group. The main results of the questionnaire were as follows:

Previous study and interest in history

In the L4 group 16 out of 23 respondents had previously studied GCSE and A-level history, but when this data was broken down further, 3 respondents indicated that they had only studied GCSE or A-Level history and 4 respondents indicated that they were international students. In the L5 group 16 out of 17 respondents had previously studied GCSE history and 14 had studied A-level history. Two respondents indicated that they did not study A-Level history, one respondent indicated that they had not studied either GCSE or A-Level and there were no international students. These results indicate a degree of variation in respondents' prior learning in history which is likely to be reflected in differences in experience in making the transition to undergraduate study. The greater variance in the L4 group is likely to be reflected by the structure of the course in the School of Humanities, outlined above, and 4 respondents out of 23 indicating that they were international students. Nevertheless, this highlights a limitation of this paper – it is unclear the extent to which student experience of transition is affected by their prior learning in history. This would need to be addressed through further interpretation and analysis of the collected data and focus groups interviews.



When asked what their favourite history topic studied at school was, respondents across both groups gave a wide variation of answers, displaying quite a diverse range of interests, but the most popular were Tudors, Nazi Germany, World Wars and the Cold War. From my professional experience these are all popular topic areas taught in school history, from ages 11 to 18 years old, as reflected in GCSE and A-Level history options. Interestingly, respondents' preferences reflected the Anglo/Eurocentric nature of a lot of school history which has been increasingly challenged recently (Nascimento, 2018). One key way in which university history departments could support schools in preparing their students for undergraduate study would be to actively engage, advise and guide history teachers in diversifying their school curricula. Foster (2011), Watts and Gimson (2014) both highlight how such collaboration between schools and academics can have a real impact of pupil learning in history. When respondents were asked the main reason why they chose to study history at university a high proportion of answers indicated enjoyment and a 'love of history' as evident in Chart 1.



Learning preferences and skills developed in undergraduate study



Across both groups, respondents indicated a strong preference for particular ways in which they liked and disliked learning history. In the L4 group, as highlighted by Chart 2, the highest preferences were for lectures (15), seminars (12), reading (11), working with sources (9) and debates (8) from 23 respondents. By comparison, some of these preferences were similar in the L5 group – lectures (10) and debates (9), but less so for seminars (4), reading (4) and working with sources (5) from 17 respondents. In the L4 group, as highlighted in Chart 3, the least liked preferences for learning history were student-led presentations (13), seminars (5) and working in groups (5) compared to 10, 4 and 5 respectively in the L5 group.

There were some notable differences between the two groups, in particular, 9 respondents expressed a positive preference for discussions in class in the L5 group compared to the L4 (4), and only four L5 respondents indicated a positive preference for reading compared to eleven in the L4 group.

These results suggest two distinct learning preferences of students as they make the transition to undergraduate history. The first is what Booth (2005:2) describes as the "preeminent position" of lecturers and tutors in "history students' conceptions of learning" hence the dominant preference for lectures. Seminars, debates and class discussions also have a high preference but, as Hibbert (2006: 219-220) suggests, these are a functional way for a lecturer to impart knowledge in another way. Is this a surprise? Particularly when many students have previously developed close relationships over several years with their school history teachers. At the same, the results suggest that there is significant degree of antipathy towards collaborative learning particularly student -led presentations and group work. Why is this the case? Is it that history students do not value the contributions of their peers compared to the 'expert' knowledge of their lecturers or is a reflection of the social awkwardness when transitioning to a new environment? Booth and Nicholls (2005: 1) argue that history lecturers should reject traditional lectures in favour of more collaborative forms of learning, whereas Hibbert's (2006: 220) suggest that students have no particular learning preferences, what is most important is there relationship with their tutors.





In terms of learning skills most developed in the semester the most frequently rated by the L4 group, as highlighted by Chart 4, were reading (14), research and enquiry (9), critical thinking (6) and time management (6). Interestingly, this compares to reading (14), research and enquiry (9), critical thinking (6) and time management (6) for the L5 group. Both the L4 and the L5 group, as highlighted in Chart 5, indicated that they had least developed confidence in speaking (7 and 9 responses respectively) and time management/organisation (4 and 12 responses respectively). In many ways these results were reassuring. The concerns raised by my UH history colleagues and highlighted by Booth (2006:1) about the lack of learning skills were those that were reported to be most developed by the respondents. What is unclear is whether students are able to make meaning out of this learning in order to become independent critical thinkers or they continue to be passive recipients of learning as highlighted by a lack of confidence in speaking publicly and collaborating with their peers (Foster, 2011:12)



Advice that would be given to others about studying history at degree level



The questions in this section of the questionnaire were not answered by every respondent which suggests a design fault – the questions were at the end, perhaps indicating 'survey fatigue' and were open-ended. 13 out of 21 responded in the L4 group and 12 out of 17 in the L5 group. Charts 6 and 7 show responses to the question '*What ONE thing do you wish you had known in September about your degree that you now know?*' Responses to this question differed between L4 and L5 students but did focus a several key areas within each group. Most responses indicated that students wanted more information about the structure and organisation of their courses at the beginning of term, an issue which the History Department is addressing.



Charts 8 and 9 show responses to the question '*What ONE piece of advice would you give to a school student who is thinking of applying to study history at university?*' The most frequent responses focused on the amount and range of reading required at undergraduate level; the importance of becoming better organised and more independent; and having a clear understanding and expectation of the degree programme and module options. Smith and Hopkins (2005: 315) suggest that these are common issues which undergraduates were traditionally expected to adjust over time which is "potentially wasteful of time and energy for students and tutors, and may not be well-founded". It is argued that it is the joint-responsibility of universities and schools, not eliminate this transitional step, but to make it a smoother experience, more of a ladder than a hurdle (Smith and Hopkins, 2005: 315-316).

Conclusion- Next Steps:

In conclusion, the preliminary findings of this research project suggests that the factors which make the transition from school to undergraduate history more of a hurdle than a ladder are more complex than a lack of preparation, skills, motivation and application. Transition is not just about what students know, in terms of knowledge, skills and understanding, and how they learn it, whether through lectures or student-led presentations. Transition is about how students perceive themselves as learners, working independently and in their relationships with their lecturers and peers, and what they perceive to be the nature of learning is itself. Therefore, one way in which this hurdle could be turned into a ladder is to help students develop a greater awareness of what learning is and how they see themselves as learners, both in school and at university.

In order to explore these issues further, it is planned to follow up the survey with smallgroup semi-structured focus groups in order to examine the responses and issues arising in more detail. Subsequently it is aimed to repeat the questionnaire in the next academic year for L4 and L5 students and extending it further to L6. The wider aim of the research project is to continue to identify and examine barriers in the transition to undergraduate history, and potentially beyond, in order to inform curriculum design, develop pedagogical practice and to foster and promote further collaboration between academic history, school history and history education across the Hertfordshire area.

References:

Ballinger, G.J. (2002) 'Bridging the gap between A Level and degree. Some observations on managing the transitional stage in the study of English literature.' *Arts and Humanities in Higher Education*. 2(1): 99-109.

Booth, A. (2005). "Worlds in collision: university tutor and student perspectives on the transition to degree level history". <u>Teaching History</u>, (121), p.14.

Booth, A. and Nicholls, D. (2005). "History teaching in Higher Education: breaking down the barriers to progression and dialogue". <u>sas-space.sas.ac.uk</u> (accessed 2.5.18).

Chapman, A. (2011). "Twist and shout? Developing sixth form students' thinking about historical interpretation", in <u>Teaching History</u>, pp. 24-33, No. 142.

Cohen, L., Manion, L. and Morrison, K. (2018) *Research Methods in Education*. 8th Edition. London: Routledge.

Collins, M. (2011). "Historiography from below: How undergraduates remember learning history at school." <u>Teaching History (142)</u>: 34.

Foster, R. (2011). "Passive receivers or constructive readers? Pupils' experiences of an encounter with academic history", in <u>Teaching History</u>, pp.4-13, No. 142.

Hargreaves, D.J. (1998) 'Addressing the transition to tertiary education in engineering.' *European Journal of Engineering Education.* 23(1): 79-89.

Hemsley, L. (2016). "Nurturing aspirations for Oxbridge" in <u>Teaching History</u>, pp. 28-36, No. 165

Hibbert, B. (2002). "'It's a lot harder than politics'... students' experience of history at advanced level." <u>Teaching History (109)</u>: 39.

Hibbert, B. (2006). "The articulation of the study of history at GCSE A-Level with the study of history for an honours degree" <u>Unpublished PhD Thesis</u>. The University of Leeds.

Mansfield, A. (2018). "The Utilisation Of Gobbets For Student-Centred Learning For The Teaching Of History At University: a report." <u>International Journal of Historic Learning,</u> <u>Teaching and Research</u>: 99.

Marland, M. (2003) 'The transition from school to university. Who prepares whom, when and how?' *Arts and Humanities in Higher Education*. 2(2): 201-211.

Nascimento, S. N. (2018). 'Identity in history: why it matters and must be addressed' in *Teaching History*, pp.8-19, No. 173.

Newby, P. (2014) *Research Methods for Education*. 2nd Edition. London: Routledge.

Retz, T. (2016). "At the interface: academic history, school history and the philosophy of history." <u>Journal of Curriculum Studies</u> **48**(4): 503-517.

Seixas, P. (2017) 'A Model of Historical Thinking' <u>Educational Philosophy and Theory</u>. 49(6): 593-605.

Smith, K. (2002) 'School to university. Sunlit steps, or stumbling in the dark?' *Arts and Humanities in Higher Education.* 3(1): 90-8.

Smith, K. and C. Hopkins (2005). "Great expectations: Sixth-formers' perceptions of teaching and learning in degree-level English." <u>Arts and Humanities in Higher Education</u> **4**(3): 304-318.

Walmsley, A. (2000) 'Attitudes of students towards mathematics in the transition from school to university' *Mathematics Teaching*. 173: 47-9

Watts, J. and Gimson, D. (2014). "Taking new historical research into the classroom: getting medieval [and global] at Key Stage 3" in <u>Teaching History</u> 156, pp.22-31.

White. (2011). "A comparable revolution? An argument for an in-depth study of the Iranian revolution in a familiar way", in <u>Teaching History</u>, pp. 40-47, No. 142.

Appendix:

Transition to undergraduate history questionnaire: Autumn 2018

The following questionnaire aims to find out your about your experiences in making the transition to studying history as an undergraduate at the University of Hertfordshire. The questionnaire is part of a wider research study aimed at improving the student experience of history undergraduates in the future.

The questionnaire is voluntary. It is completely up to you whether or not you decide to take part in this study. If you do decide to take part you then it is assumed that you have given consent by agreeing to complete the questionnaire. You are free to withdraw at any stage without giving a reason.

The questionnaire is also anonymous. You do not have to give your name or any personal details about yourself. However, there is an option for you to add your name and contact details should you wish to take part in any follow-up interviews as part of the research study. Again, you are free to withdraw at any stage without giving a reason.

Should you wish to take part, we would appreciate that any comments you make, whether positive or negative, are constructive.

Thank you for your time in completing the survey.

1. Did you study GCSE History? (Please Tick) YES [] NO []

2. Did you study A-level History? (Please Tick) YES [] NO []

3.	W	hat was y	our fav	ourite his	tory to	pic that	you studi	ed at s	chool? C	Circle ONE p	lease:
	Romans	Medi	eval	Tudors	Indu	strial Rev	olution	World	Wars	The Nazis	Cold
						War					
	USA	Russia	China	Germ	any	France	Middle	East	Africa	British E	mpire
		Med	licine	Crime 8	، Punis	hment	Warfare	Pro	otest & Po	olitical	
				Ch	ange		Witchcr	aft			
	Other [Plea	ase specif	y]								

What was the main reason that you chose to study history at university? Circle ONE please: Love of history Develop thinking skills Future Career Research & Enquiry Learning about the past Enjoyment My best subject at school Better job prospects

Other [Please specify]

5. Which of the following do you think you have <u>most</u> developed this Semester? Circle <u>as many</u> as you wish:

Critical thinking Tir	ne management	Organisation of	
	work		
Confidence in speaking in front of others	Confidence in written	expression	
Reading books, journal articles etc.	Research and enquiry skills others	Working with	

Other [Please specify]

Any comments?

PTO>

	6. How do you like to lear	n history?			
	Circle <u>as many</u> as you wish:	o .			
	Lectures Student led Dresentations	Seminars	Work Discussions in els	king in groups	Debates Working in
	Student-led Presentations		Discussions in cia	SS	working in
	Enquiry-led learning		Reading	,	Working with sources
•	Other [Please specify]		reading		working with sources
	Any comments?				
	7. Which of the following Circle as many as you wish:	do you think	you have <u>least</u> de	veloped in Se	emester A?
	Critical thinking	Tin	ne management work		Organisation of
	Confidence in speaking in fi	ront of others	Co	onfidence in w	ritten expression
	Reading books, journal articles	etc.	Research and enq	uiry skills	Working with
	Other [Please specify]				
	Any comments?				
	8. What do you <u>least like</u> Circle as many as you wish:	about studyii	ng history?		
	Lectures	Seminars	Work	king in groups	Debates
	Student-led Presentations		Discussions in cla pairs	SS	Working in
	Enquiry-led learning		Reading	,	Working with sources
•	Other [Please specify]				
	Any comments?				
٩	What ONE thing do you	ı wish you ha	nd known in Senter	mber about v	our degree that you
υ.		a misii you lie	a mown in ochiel	inser about y	our acgree that you

now know?

What ONE piece of advice would you give to a school student who is thinking of 10. applying to study history at university?

Optional – You do not have to fill this in if you do not
--

Age: Gender:

Yes, I would be interested in participating in further research on my experiences in making the transition to studying history as an undergraduate at the University of Hertfordshire.

Name:

Email:

Using Cognitive Load Theory to improve the use of slideshow presentations and support a more efficient learning process

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Abstract:

Improving slideshow presentations can have positive effects on the learning process. Simple adjustments to the design of slides can focus the learner's attention and reduce the demand on the learner to process the information. It is common to sit through a lecture or lesson with cluttered slides containing pictures, text, animations and the instructor talking over it at the same time. The limited nature of the working memory means a learner can only hold a certain amount of information at one time. However, this information can be lost due to distraction or being presented in a way that is not sympathetic to how the mind works. Using slides that I have presented before, I will highlight unintentional effects on the learner and identify ways in which an educator can take advantage of the characteristics of the working memory to produce slideshows that can support a more efficient learning process.

Introduction:

A slideshow is ubiquitous in lecture halls and classrooms where technology has been incorporated into the learning environment. A slideshow is defined by me as an application like PowerPoint, Prezi, Beautiful [AI] or other application used for presenting information using a data projector and a personal computer. But reflecting upon a 20-year career in the classroom I have never had professional development about the most effective way to use a slideshow or relate the use of one with how the mind is designed to process information. Moutlon et al., (2017) write that, "surprisingly little is known about how effective such presentations are." And Savoy et al., (2008) write that the benefits of PowerPoint are continuously debated, its effectiveness has yielded mixed results and yet students prefer it to oral presentations. I will consider how we can design more effective slideshows which are sympathetic to the minds architecture using Cognitive Load Theory (CLT) to inform the process.

An introduction into how the mind works?

CLT was first postulated in the late 1980s by John Sweller. Research into CLT has demonstrated that instruction techniques used by teachers or lecturers are most effective when they are designed to be sympathetic to how the mind works to benefit learning (Centre for Education Statistics and Evaluation 2017). Sweller based CLT on the model of the mind proposed by Baddeley and Hitch (Debue & van de Leemput 2014) and the interactions between the long-term memory (LTM) and working memory (WM).

Baddeley's (2003) revised model of the mind identified the LTM, WM and the central executive (CE) which work together to carry out the functions of the mind. The WM being the site of consciousness and information processing that works with other subsystems of the mind including the LTM and aspects of the CE. Two subsections of the CE are the phonological loop and the visuosketch pad which can hold auditory and visual information simultaneously in the WM.

The WM is limited both in the amount of information it can hold and for how long. Distraction can also empty it. The WM can also retrieve information from the LTM. These characteristics are useful to know when planning lessons. The storage of information in the LTM only occurs if attention is paid to it by the WM. We are more likely to pay attention to information that we are familiar with. If a learner does not have information stored in the LTM then the learner is more likely to suffer cognitive overload.

As Ausubel wrote in (1978) "The most important single factor influencing learning is what the learner knows already. Ascertain this and teach them [*sic*] accordingly". Issues with slideshows can arise when they can become cluttered, the learner is not sure where to pay attention and images have not been chosen carefully to support the learning process. The concept might be complex, abstract or the learner is meeting the information for the first time. All these issues can increase the demand on the WM.

Gathercole and Alloway (2007) noted that in primary school children information is easily lost through distraction, trying to hold too much information in the WM and that engaging in a task that is too demanding causes overload and this leads to WM failures. These failures might manifest themselves in behaviours such as students losing their place in a complicated task, forgetting the content of instructions and making poor academic progress throughout the year. If trainee teachers can devise slideshows that can reduce WM failures by minimising the possible overload in a slideshow then it is possible that learning can take place. A more useful model of the mind can be seen below:



This model shows the WM paying attention to stimuli from the environment. Weinstein et al., (2018) define attention as "A limited capacity cognitive resource that directs and maintains focus on a specific resource". Like WM it is also a finite resource. As an aside this information does help to dispel the myth of multitasking (Kirschner & De Bruyckere 2017). Dividing your attention between 2 activities invokes a switching penalty which makes the learning process extremely inefficient, slowing down information processing and storage in the LTM. Recognising that the WM is limited means that if we want information to be stored in the LTM and thus learning has taken place; a slideshow must be designed not to overwhelm the WM. Since attention and WM are limited constructing slideshows where the information is easily accessible, and the learner is not misdirected to multiple images will benefit learning.

What is Cognitive Load Theory?

CLT considers the characteristics of the WM. Reif's (2010, p. 361) description of cognitive load to be extremely useful; 'The cognitive load involved in a task is the cognitive effort (or amount of information processing) required by a person to perform this task'. There are three types of cognitive load and they are seen as having an additive effect:

Intrinsic – This is the inherent difficulty of the material that is being taught. For example, learning individual words of French vocabulary has a lower load than writing grammatically correct sentences in French. This load is also compounded by the learner themselves. The load for a novice doing fractions for the first time is higher than for someone who has mastered it. It is load that the teacher/lecturer must manage when pitching the lecture to their audience.

Extraneous – This is described as the unnecessary load placed on the WM. It doesn't support the learning process and is often caused by the teacher/lecturer being too vague with instructions which increases the load on the WM. The learner is trying to decipher the teacher's instructions and isn't focusing on the learning. Or a slideshow that contains too much information so that the learner is not sure where to focus their attention. It is important to minimise this extraneous load.

Germane – This is the amount of load that is placed on the WM that contributes to learning. This means it is the amount of mental processing that is required to cause a change in the LTM. Kirschner et al., (2018) wrote that it can be "defined as the working memory resources devoted to dealing with intrinsic cognitive load" but some commentators have written that it is a function of intrinsic load (Kayluga 2011) and so it is difficult to separate the additive effect of germane load from intrinsic load. This problem with the germane load renders the theory unfalsifiable (Didau 2019, Holton 2009). This is an interesting dilemma, but a slideshow is directly related to the extraneous or unnecessary load. So teacher instruction must be designed to reduce the demands on the WM otherwise cognitive overload is experienced and the learning process becomes frustrating and unnecessarily difficult. It is the teacher's responsibility to ensure that distractions are removed from slideshows to support more effective learning.

To encourage the storage of information in the long-term memory a teacher/lecturer must consider how they can manage the intrinsic load and reduce the extraneous load. To do this they must know the inherent difficulty of the topic they are teaching and break it down into smaller, more manageable chunks. This decreases the demand on the WM of the learner. Minimising the extraneous load by having an uncluttered slideshow and making it obvious where the learner should focus their attention means that more processing power is available to process the information. In his blog, A Chemical Orthodoxy, Adam Boxer (2018) quotes Reif (2010) who states that cognitive load is:

Figure 2: Factors affecting cognitive load (Reif2010)

 $Cognitive \ load = \frac{task \ demand}{available \ resources}$

If an educator chooses a task that has a high demand, then the learner will not have many resources available to process the information and so the learner quickly suffers cognitive overload. This can manifest itself in the WM failures as described by Gathercole & Alloway earlier. An educator using a slideshow cluttered with information can inadvertently increase the cognitive load because the available resources of the learner are diverted to different aspects of the slideshow.

Analysis of author's own slides

This is best exemplified by this slide taken from the University of Hertfordshire's own template:

The inclusion of the TEF Gold and Times Higher Education logos are an unwelcome distraction because the Click icon below to add image 28,28cm x 12,75cm learner's eye can be drawn towards them. They are an example of split attention and the redundancy effect (Kalyuga et al., 1999) The learner's WM is limited and so any additional or extraneous sources of cognitive load diminishes the resources available for Enter subtitle here learning. The logos might be fine on the first and last slide?

Figure 3: University of Hertfordshire PowerPoint template slide

TEF Gold Excellence

This slide is an example of a learner being overwhelmed with information which increases extraneous cognitive load as opposed to diminish it. The GCSE syllabus from which this is taken does not require knowledge of the cell structure in the pancreas and so the picture in the bottom right hand of the slide is redundant. If this was removed and the diagram of the labelled torso was made bigger the teacher would be able to more effectively draw the learner's attention to the different types of glandular tissue and where it is found in the body. The picture is purely for decoration.

One of the most common examples of this is when a teacher or lecturer presents a slideshow that might look like this slide taken from the author's archives of PowerPoint slides from his teaching career:

<u>B: Glandular tissue</u>

Glandular tissue is involved with delivering hormones in the body. This tissue is rich in capillaries. Each cell must contact a capillary directly in order to deliver its hormone to the rest of the body.

Questions

- Give one example of where glandular tissue is found in the body.
- 2. Why must the glandular tissue be close to capillaries.
- Why would the human digestive system need glandular tissue.

Figure 5: PowerPoint slide from the author's own library. Glandular Tissue (GCSE Biology)



Too much writing is another example of excessive extraneous cognitive load in a slide:

There is far too much information in this slide and it is unlikely that the learner would be able to access it all unless the educator took their time. It is also typical of a slide like this that the teacher will be talking over the slide and so the learner has to decide where to divide their limited resources. Should they read the slide or listen to the teacher? Within a class of 30 or a lecture hall of 100 it is likely that the students will be split into those who do one or the other. But it is likely that some will do neither because their WM has been overloaded.

> 1. The graph shows the fish stocks of some species in the North Atlantic. Describe what happened to the herring population between 1963 and 2005

The herring stocks decreased from about 2,200 thousand tonnes to less than 500 thousand tonnes between 1963 and 1967.

This could be due to the increase in technology of fishing trawlers such as sonar to detect the fish, advanced nets with small holes so that smaller fish cannot escape, that could be dragged along the sea bottom catching huge quantities of fish. The boats became bigger, the crew could live for long periods of time at sea and they had freezers to store the fish for longer.

The Herring were overfished nearly to the point of extinction but around 1978 the population recovered to around 1200 thousand tonnes. There was another decrease in 1990 but this began to rise again in 1996 until 2005.

The population recovery could be due to national governmental schemes to conserve the fish and make fishing more sustainable. For example, the holes in the net now have to be a certain size so that smaller, younger fish can escape and breed. There are also fishing quotas put in place which meant fewer herring were allowed to be caught allowing the population to recover.

Figure 6: PowerPoint slide from the author's own library. Fishing Stocks (GCSE Biology)

BLENDED LEARNING IN PRACTICE | Spring 2019

Figure 7: PowerPoint slide downloaded for free from the Times Educational Supplement and used by the author in teaching GCSE Science.

This slide contains an image and writing. There are also various logos surrounding the slide. Returning to Baddeley's (2003) model of the mind he suggests that the mind is efficient at processing auditory and visual information simultaneously and he refers to the phonological loop and the visuosketchpad. However the learner also has writing on the slide to interpret as well and so their attention is split 3 ways. This increases the extraneous cognitive load and reduces the efficiency of the learning process. Wang (2014) refers to seductive details which are interesting but irrelevant information that is added to a resource to make it interesting.



Many slideshows are littered with these irrelevant images which are used with the good intention of engaging the learner. But it is important to select images that are appropriate to the group being taught and remove irrelevant information. The slide above was for GCSE students. Instead of instructing the learners to ignore certain aspects of the slide it would be better if the instructor removed them in the first place. Figure 8 below shows the information which should be removed from slide 7.

By removing this extraneous information the learners attention can be more focused. The instructor can draw their attention to the relevant parts of the slide and these 'seductive details' which are irrelevant to the learner no longer have to be processed. This is a slide that is far more sympathetic to how we learn taking into account the limited nature of the WM.

Figure 8: Slide used in Figure 7 with the extraneous information removed.



Scanning Electron Microscope image of yeast: Researchers are developing novel yeast strains and fermentation processes that optimise bioethanol production. Bioethanol is produced by fermentation of simple monosaccharide and disaccharide sugars by yeast such as *Saccharomyces cerevisiae*.

In Figure 9 below I have attempted to edit the slide to make it even simpler and therefore increase the efficiency of the learning process.

The label identifying the image as yeast has been moved much closer to the image to reduce the split attention effect which will be explained in more detail later. The text has been split up so that the messages in the text are easier to interpret. If the teacher also points to them at relevant points in the explanation it can improve the instruction and reduce the extraneous cognitive load.

Figure 9: Slide edited to reduce extraneous load.



Researchers are developing novel yeast strains and fermentation processes that optimise bioethanol production.

Bioethanol is produced by fermentation of simple monosaccharide and disaccharide sugars by yeast such as *Saccharomyces cerevisiae*.

The issue with these examples of slides is that they are constructed in a way that does not support the learning process. The learning process will be slowed down, it is possible that content might be misunderstood, and a WM failure will manifest itself. Most teachers have experienced a classroom or lecture hall when quite quickly a sea of blank faces start to become restless because they are unable to access the material. There are many factors that can contribute to this but there is no need for the teacher to contribute to this with a poorly constructed slideshow.

Recommendation Based on Cognitive Science:

The 2 effects below recognise that WM is limited and support teacher instruction that is sympathetic to how the mind processes information.

The Modality Effect

Mousavi et al., (1996) confirm some of Baddeley's findings that the WM has subsections like the phonological loop and the visuosketch pad. They suggest that presenting just an image which the teacher talks over is more efficient for learning than a slide which has an image and writing on it. In recent years I have started using slides with pictures, but I leave space to annotate them so that I can focus the learner's attention to the relevant part of the diagram. This process is called the multimodal effect. Mayer (2009) takes this further with his Cognitive Theory of Multimedia Learning where he identifies principles for managing essential processing. The one with the greatest effect size is modality which presents words as spoken text rather than printed text. As my own practice has developed, I feel confident enough to remove text from slide shows but there are times when text can be useful as an aide memoire or to focus the attention at a specific place on the slide.

The modality effect is strengthened by the work of Allan Paivio who postulated 'Dual Coding Theory' in the 1970s where by: "Dual coding theory capitalized similarly on the distinction between structural availability and effective use of multimodal mental representations in various tasks" (Paivio 2014). Like Baddeley he identifies key characteristics of the WM which can process non-verbal imagery and verbal imagery simultaneously. This supports the inner voice processing information creating mental images which is extremely desirable in the formation of new memories in the LTM.

The Split-Attention Effect

Ayes and Sweller (2006) wrote that, "The split attention principle states that when designing instruction, including multimedia instruction, it is important to avoid formats that require learners to split their attention between, and mentally integrate multiple sources of information."

Figures 10 and 11 show how a slide can be effectively designed to reduce the extraneous cognitive load. In Figure 10 the diagram of the heart has a visual representation of the heart and a key of all the structures.

Figure 10: A diagram of the heart with a key for the various structures. Higher extraneous cognitive load. (Torrance-Jenkins 2017)



Key

- A vena cava
- B aorta
- C pulmonary artery
- D pulmonary veins
- E right atrium
- F left atrium
- G right ventricle
- H left ventricle

When a learner looks at this diagram they are not adhering to Ayres and Sweller's principles of split attention because they must look at the diagram and then the key. Interpreting the numbers and the relevant structure means that additional information must be held in the WM and a learning penalty is paid.

A more effective diagram which reduces the split attention effect and reduces the extraneous cognitive load can be seen in Figure 11:

Figure 11: A diagram of the heart with a key for the various structures. Reduced extraneous cognitive load. (Torrance-Jenkins 2017)



The integration of the labels and the diagram reduces the extraneous cognitive load meaning that the WM can process the information on the diagram more easily to the benefit of learning. Learning being defined as a change in the LTM (Kirschner, Sweller & Clark 2006). However, Bokhove (2018) has recently written in the Times Educational Supplement that Sweller and Kirschner's definition of learning is not helpful. He cites Barron et al., (2015) because he writes that "the learning process is very difficult to define, and that learning can take place in multiple ways using multiple methods." In their book, 'Memory', Bjork and Bjork (1996) consider how information can get into the LTM. They cite Atkinson and Shiffrin (1968) who noted that "voluntary elaboration seems to be one of the most effective strategies." This is echoed somewhat by Willingham (2009) who writes that, "memory is the residue of thought." If learning is going to take place, then learners must think about the material. If the message is obscured in a poorly constructed slideshow then it is unlikely that the learner will cognitively engage, and the efficiency of the learning process is reduced.

Interactions between the WM and LTM:

One aspect of CLT is that the intrinsic load depends upon the prior knowledge of the learner. Reif (2010) describes the available resources to the learner and internal resources or prior knowledge can help reduce cognitive load. This can be further explored by looking at the differences between experts and novices (National Research Council 2000). When exposed to the same stimulus an expert perceives and understands a stimulus differently to a novice. This is because they have formed more complete schema in their LTM. A schema being defined as, "Pre-determined categorisations of the world and the behaviour of objects and people" (Weinstein et al., (2018). A more fully formed schema reduces cognitive load because the WM can reference this schema from the LTM and reduce the demand on the WM. A good example of this is learning to drive a car. An expert becomes fluent in the processes of driving and doesn't have to think about them. A novice has an incomplete schema because they are still learning and so the process of driving is more effortful.

This means that it is very important when an educator chooses images that can support the development of complex or abstract ideas. Ill-judged images can increase the cognitive load and those irrelevant pictures that are used to engage the learner might indeed be hampering learning. The learner might be engaged in trying to interpret an image to find its relevance and development of a schema when in fact the visual is purely a seductive detail.

Final Recommendations:

Educators in all sectors should be made aware of the characteristics of the WM and how these can be applied to instructional approaches to teaching. Slideshows are common across all sectors and the effective use of these can support the learning process and should not unintentionally hinder it. I would recommend that when using a slideshow, you must try to reduce extraneous cognitive load, not add to it, and the following recommendations can support this:

- 1. Keep the amount of text on a slide to a minimum.
- 2. Think carefully about the images used and ask yourself if they support the development of a concept.
- 3. Ensure that every detail on the slide can be read by the audience.
- 4. Use animations to reveal text or images one at a time to focus attention.

5. Use the Modality Effect to your advantage presenting images and auditory information simultaneously.

(adapted from Tharby 2018:72)

References:

Ausubel, D. (1978) Educational Psychology. A cognitive view. 2nd Edition. New York. Holt, Rinehart and Winston

Ayres, P. & Sweller, J. (2006) The Split-Attention Principle in Multimedia Learning.

Baddeley, A. (2003) *Working memory: looking back and looking forward*. Nature reviews neuroscience, 4(10), 829-839

Barron, A.B., Hebets, E.A., Cleland, T.A., Fitzpatrick, C.L., Hauber, M.E., and Stevens, J.R. (2015) *Embracing multiple definitions of learning*. Trends in Neurosciences, 38(7), 405-407

Bjork, R. & Bjork, E. (1996) Memory. Handbook of Perception and Cognition. Edited by Elizabeth Ligon Bjork and Robert A. Bjork. 2nd Edition. Academic Press.

Bokhove, C. (2018) Why Ofsted's definition of learning is problematic. Times Educational Supplement.

Boxer, A. (2018) Simplifying Cognitive Load Theory.

Centre for Education Statistics and Evaluation. (2017) Cognitive load theory: Research that teachers really need to understand [Date accessed 6.1.19]

Debue, N. and van de Leemput, C. (2014) *What does germane load mean? An empirical contribution to the cognitive load theory*. Frontiers in Psychology. 2014; 5: 1099.

Didau, D. (2019) Making Kids Cleverer. A manifesto for closing the advantage gap. Carmarthen, Wales.

Gathercole, S and Alloway, T. (2007) Understanding Working Memory. A classroom guide. Harcourt Assessment. Holton, D. (2009) "Cognitive Load Theory: Failure?"

Kalyuga, S. (2015) *Instructional guidance: A cognitive load perspective*. Charlotte: Information Age Publishing.

Kalyuga, S., Chandler, P. & Sweller, J. (1999) Managing Split-attention and Redundancy in Multimedia Instruction. Applied Cognitive Psychology 13: 351-371.

Kirschner, P. A., Sweller, J., & Clark, R. E. (2006) *Why Minimal Guidance During Instruction Does Not Work: An Analysis of the Failure of Constructivist, Discovery, Problem-Based, Experiential, and Inquiry-Based Teaching*. Educational Psychologist. Volume 41, 2006 - Issue 2

Kirschner, P.A., & De Bruyckere, P. (2017) *The myths of the digital native and the multitasker*. Teaching and Teacher Education 67 (2017) 135-142

Kirschner, P.A., Sweller, J., Kirschner, F. et al. (2018) *From Cognitive Load Theory to Collaborative Cognitive Load Theory*. Intern. J. Comput.-Support. Collab. Learn 13: 213.

Mayer, R.E. (2008) *Applying the science of learning: evidence-based principles for the design of multimedia instruction*. American Psychologist 63 (8) pp.760-769

Moulton ST, Türkay S, Kosslyn SM (2017) Does a presentation's medium affect its message? PowerPoint, Prezi, and oral presentations. PLOS ONE 12(7): e0178774.

Mousavi, S.Y., Low, R. and Sweller, J. (1995) *Reducing cognitive load by mixing auditory and visual presentation modes*. Journal of Educational Psychology 87 (2) pp. 319-334

Paivio, A. (2014) *Intelligence, dual coding theory, and the brain*. Intelligence Volume 47, November–December 2014, Pages 141-158

Reif, F. (2010) Applying Cognitive Science to Education. Thinking and learning in scientific and other complex domains. The MIT Press.

Tharby, A. (2018) How to explain absolutely anything to absolutely anyone. The art and science of teacher explanation. Carmarthen. Wales. Crown House Publishing LTD

Torrance-Jenkins, R. (2017) Using educational neuroscience and psychology to teach science. Part 1: A case study review of Cognitive Load Theory (CLT) and Cognitive Acceleration through Science Education (CASE). School Science Review. Association for Science Education. Issue 367. p97 Weinstein, Y., Sumeracki, M. & Caviglioli, O. (2018) Understanding How We Learn. A Visual Guide. Abingdon. Oxford. Routledge.

Willingham, D. (2009) Why Don't Children Like School? San Francisco, CA: Jossey-Bass.

Could Personal Tutoring help improve the Attainment Gap of Black, Asian and Minority Ethnic Students?

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Abstract:

There has been a noticeable gap in the attainment gap of Black, Asian and Minority Ethnic (BAME) students in UK as a whole and UH is not different. There has been suggestion that having a personal/pastoral tutor might help reduce this gap. As part of the effort to stablish the veracity of such suggestion, the present study will offer an analysis between pastoral tutoring and ethnic minority performance and the use of social learning and dialogic co-construction to support it within Higher Education. Literature review methodology was used to drive the work. Analysis has shown that there is a potential of pastoral tutoring helping narrowing the BAME attainment gap. It also suggests that BAME students might prefer to connect to like-minded individuals that they feel comfortable around i.e. staff of the same ethnic background. Furthermore, there is a believe that pastoral tutoring can help raise the attainment gap by positively create that sense of belonging that comes through having a through-out support and a reliable point of contact and space where students feels empowered to share and discuss not just academic aspirations but also deep personal issues.

Personal tutoring and the impacts of the BAME attainment gap:

There has been supporting reflection and analysis that pastoral tutoring has the potential to enhance student learning experience (Thomas, 2006a and Stevenson, 2009). Stevenson goes further and refers that if done correctly it enables students to connect between the different elements of the learning experience. Personal tutoring (Purdy, 2013) is the action of looking after the total welfare of the student by providing information, guidance and support.

Since research shows that the student's welfare is directly connected to their performance in Higher Education, then, most likely having personal tutor might help particularly struggling ethnic groups such as BAME achieve better results and narrow their attainment gap. Though there has been a noticeable increase on the numbers of students graduating with a first or a 2:1, the gap between the BAME students that receive these degree classifications to white British students is still considerable. The implications of this attainment gap are:

- BAME students are less likely to get high level jobs due to the fact that many graduate-level jobs and postgraduate courses stipulate a 2:1 degree or above as a minimum entry requirement;
- BAME students might be less likely to want to become academics if they have not had a positive experience of higher education;
- And in general, will this poor higher education experience reflect on how graduates prepare the future generations on the prospects of higher education?!!

As in 2010 three quarters of the advertised jobs required a minimum 2:1 degree grade to be able to qualify (BBC News, July 2010). This means that any applicant that has not achieved the minimum required will be filtered out by employers. The implications to those students who have not achieved the required degree qualifications are massive and to those already coming from social disadvantage backgrounds in particular.

Figure 1: Minimum entry requirements demanded by employers in 2010

2.1 Degree Classification
Demonstrate certain competencies
Relevant work experience
Specific degree subject
2.2 degree classification
Graduate from particular universities



Source: AGR Graduate Recruitment Survey 2010 (via BBC news)

This leaves Minority Ethnic Students at a massive disadvantage and stuck in a vicious cycle. Therefore, the aim is to break this cycle. But the BAME under representation is not only from the student perspective. It is also observed on HE in almost all levels to management. In fact, according to figures released by the Higher Education Statistics Agency (HESA), no black academics are in the elite staff category of managers, directors and senior officials in 2015/2016 – this for a third consecutive year.

Knowing the BAME socio-economic background:

In a way to understand in depth the factors influencing BAME student's decision and social impacts on their learning a few studies have been carried out. The following findings are based on "The Ethnicity Attainment Gap: Literature Review, 2016" by Miriam Miller from University of Sheffield.

• Black students are more likely to be mature students than other ethnic groups and less likely to enter Higher Education with A-Levels. The attainment gap for mature BAME students has traditionally been higher than for young BAME students.

- BAME students are concentrated in a smaller number of institutions than White students. Black students are more likely to come from and study in London than other ethnic groups. Black, Pakistani and Bangladeshi students are more likely to study at low entry profile Higher Education Institutions. There is some evidence to suggest Black students may prefer to study where there are other Black students and Black culture/history on the syllabus.
- Engineering, architecture and science subjects attract a greater proportion of young Pakistani and Bangladeshi, Chinese and Indian and other Asian students compared to students from other groups. In particular, these subjects attract a much larger proportion of Chinese students.
- BAME students are more likely to come from deprived areas, areas of low HE participation, and working class family backgrounds.
- Students from low socio-economic backgrounds are more likely to be first generation entrants. (This pattern is not specific to BAME students). First generation entrants are more likely to stay at home than live independently, usually due to financial reasons. Parents of first generation entrants are also less likely to be in a position to give comprehensive IAG, which can be compounded if the school or college also gives poor IAG.
- 'Social debt' plays a part in considering HE study BAME students are more likely to be funded by parental contributions, which can foster a feeling of needing to pay them back in kind.

This review shows that decoding the approach of a tutor to support a BAME student can be very complex. One has to understand each individual and their social background to general maintain a level of interest on the student's behalf. Based on this Miriam review and being of and ethnic minority background myself, I believe that it is important for a personal tutor to be able to understand and empathise to a degree with a student's position and conditions. Having a person who is seen as a role model and whom offers an open and confidential active support based on an honest dialogue has a great positive impact on student experience. Robert Innes (2007), stated that the nature of dialogue and communication and its role in the meaning-making process is central to understanding how discourse facilitates the development of enduring understandings for use in future problem solving (p.3). Robert also shows that an open dialog approach ups the performance of the students in various discipline of learning including applied maths.

Elizabeth and Lorraine (2006) on their work titled "learning Through Dialogue" discuss the vast range of benefits and approaches of a dialogue centred learning where reciprocity is in action enabling an honest and open discussion for problem solving. We see here the importance of promoting this approach within Tutor-Tutee relationship in order to enhance the understanding and experience of both.

Issues in personal tutoring and BAME:

A vast number of universities around UK offer personal tutoring/ pastoral care services to their students as part of student's welfare. In fact, there are several guidelines for the role of the Personal Tutor. Most staff are keen to work together with their tutees to positively create a sense of belonging and tackle attainment gap (Mountford-Zimdars et al, 2015).

It is important to recognise that transition into university is difficult, particularly for students from BAME and lower socioeconomic backgrounds, as they are often first-generation students and the minority group within the Higher Education division, thus find it difficult to find those like-minded individuals that they feel comfortable around. Research has shown that humans tend to connect to people that are similar to themselves. A study conducted in 2006 by Ben-Ner & Kramer from Minnesota University, USA, suggests that humans do tend to feel closer to individuals or communities that share similarities to themselves.

This raises an issue: since the ethnic minority staff within University is under-represented, how would the staff approach this situation in order to create an environment in which students feel that connection so that they can come and see their tutors at any time for any problem? Assuming that the guidelines proposed by different Universities are comprehensive, will they enable ethnic minority students to feel comfortable and share their issues?

Take the Imperial College Guidelines for the Role of the Personal Tutor (2004) for example. I can only agree that the considerations and qualities defined for a personal tutor are extensive however, this guideline was established based on a staff survey carried across all the departments within the University. It failed to account for the students' voice, particularly from ethnic minority students.

From the students stand, those who approach personal tutors tend to discuss not only their academic support but deep personal concerns too (McFarlane, 2016). While tutors might refer students to specialised University base services for the latter, they are still exposed to distressing matters exposed by the students. This means that pastoral tutoring cannot be sustained by the individual qualities of a tutor alone. Therefore, to enhance personal tutoring and therefore student learning, meaning having the tutor fully aware and prepared to guide the student, there might be a requirement to further develop a tutor's competence and confidence to perform their roles and to identify support strategies

How to address particular issues...:

So, how do we tackle this issue? There is a lot of interest and research in this area, with various different views on how to approach the attainment gap. The Equality Challenge Unit suggest that it will require a variety of different initiatives and approaches to address entrenched racial inequalities. They propose that action needs to focus on institutional

barriers and inequalities, rather than 'improving' or 'fixing' the student. Furthermore, the ECU states that traditionally, the language of the attainment gap has focused on students' underachievement or lack of attainment, whereas it should focus on the institutional culture, curriculum and pedagogy. Crucially, students must be at the centre of any actions that are taken, partners in addressing the gap.

The UniversitiesUK 2015 report "Measuring and recording student achievement" suggests that most graduates professional success is directly linked to their positive experience at Higher Education. This englobes not just different learning/teaching styles such as direct dialogue, social learning, student centred, etc. but a range of socio extracurricular activities such as wellbeing, socialization, support provided etc.

The University of Hertfordshire has launched a number of initiatives in collaboration with the Students Union. A number of BAME champions work directly with the University to bring the Ethnic Minority student's voice and help propose measures that would help improve the attainment gap. Diversifying the staff body at all grades is an important step that the University can take to decrease the gap – representation is important. The Equality Office acknowledges that among the UH 2500+ staff community there are approximately 16.4% who are from a Black, Asia and Minority Ethnic (BAME) background (Equality and Diversity Annual Report 2017). HEFCE have made £500,000 grants available for institutions to tackle the attainment gap.

In terms of personal tutoring, various models have been studied and suggested by authors like Myers (2007), Earwaker (1992) and Thomas (2006b). For the sake of matter, this article will not go in depth on each of the models proposed by the above authors, but rather elaborate on the positivity impact of a personal tutoring in enhance student experience and learning. However, within each of the three models proposed by the above, there is a common ground that any pastoral care model, each student is assigned with a specific member of staff to provide personal and academic support.

These models focus on well trained staff members who at the end are in position to undertake the role as a full or in a part time basis as per each Institution philosophy. At an Institution integrated curriculum model (Joyce and Susannah 2010), the activities of the personal tutor would be carefully timetabled and accounted towards their work load. This would be necessary as to guarantee the personal tutors wellbeing and peace of mind, since the burden of personal tutoring might be emotionally high if not well planned.

Why Personal Tutoring?:

The National Union for Students (NUS) has drafted a proposal for Personal Tutors by defining the key attributes of a good personal tutor based on the outcomes of the NSS (National Student Survey). Personal Tutors can be the "interlocutors" that help students to

feel that someone on their course knows them and is looking out for them in the following ways:

- Successful tutor-tutee relationships may help to foster some 'belonging'
- Discussing potential barriers to learning such as lack of self-esteem/confidence, social problems, language, disability etc. may help students to anticipate and access support early.
- Conversations with academics may support students to seek out further co- or extracurricular opportunities

On the staff perspective, the NUS suggest that staff be fully trained on being effective personal tutors and be recognised in staff rewards and recognition schemes as well as being progressive with the use of latest technologies. This is to instigate a positive approach by the staff in terms of tutoring and foster better relationship with students. Positive relationships, between staff and colleagues and peers, is a well-known factor that influence student's outcomes (Cousin & Cuerton, 2012).

The University College of London, has for years implemented personal tutoring for most of their students. Their philosophy is to not use one-size-fits all approach but rather having each programme decide the best approach on how to provide support for their particular cohort of students. However, whatever the approach, every programme has to provide every student with information on how to access personal guidance and support related to: Academic progress and associated development of research skills, careers and personal professional development and General well-being. Further to each student being assigned a personal tutor, staff receive full training and guidance on how to support their students and the role they play.

According to QAA, many academic advisor or personal tutor schemes exist only in theory, written into learning and teaching policies, but are not always fully implemented. Miriam Miller (2016) in her work found that there is a lack of robust evidence to demonstrate the impact of many interventions on differential attainment shows a clear need for planning, including strategies for monitoring and evaluation, when designing any future intervention.

In response a few Institutions, (University of Sheffield, Kings College London and University of Portsmouth) have formed a coalition and forged a set of guidelines called RARA (Raising Awareness, Raising Aspiration). They argue that students want to get to know their faculty and prefer pastoral support delivered by academics having a specific situational approach within disciplines and guiding them to best practices and aspirations for professional roles. Basically, the RARA purpose is to give tutors training, tools and guide as to how approach discussions with tutees and using real life model examples to guide students into better performance on their studies. For example, academics can make use of personal life experiences with strong positive impacts and use it to convey a positive attitude to the student. Within the Engineering department the effort of many lecturers in using their own professional/field experience to highlight an important point within a class session has been observed

However, they also suggest full-time employment of tutors, meaning for some it will not be a shared practice between being an academic and personal tutor. The argument would then be how this full-time tutor would share any academic concern with academics and if the tutee's performance evaluation from their meeting would be effectively used by academics to make necessary adjustment in teaching styles if needed. Also, the opportunity of an academic to build rapport with a struggling student might be lost.

The role of the personal Tutor:

The personal Tutor is the student first point of contact to discuss any issues relating/impacting their learning. Additionally, it is also important that tutors are also there to share student's achievement and successes, which in turn has the potential to an increase in motivation. A tutor should have a clear knowledge of the role and what it involves and what it hopes to achieve (Wootton, 2013). In short terms, Wootton describes a tutor's role as the following:

- provide support and motivation
- monitor and improve or enhance learner performance and outcomes
- identify and reduce barriers to learning
- develop transferable skills for life
- develop learning and employability skills
- develop reflective and independent learners
- plan and prepare for progression

In addition, Wootton also proposes a range of topics to discuss during this individual meeting with tutees:

- aims, aspirations and where appropriate predicted grades
- career aspirations, guidance and progression
- attendance, punctuality and behaviour
- personal, social and welfare needs
- additional learning and support needs
- coursework submission and achievement
- functional skills assessment and achievement
- exam registration, preparation and practice
- enrichment activities chosen and undertaken
- work experience and placements

However, there is also the ethical side to consider when taking on the role as a tutor. It is important understand its boundaries in relation to support students. It can be quite easy to
be drawn into "sorting out" student's issues and problems, however, this is not a personal tutor responsibility. The primary aim is to support students in identifying and resolving problems that may impact on their learning or that represent significant risk to their wellbeing. There may be instances where a student has to be referred to another supportive body within the institution for further guidance. Ethical tutoring practice, involves a professional commitment to:

- Allow students to explore and achieve their full potential by creating a positive learning environment;
- Following the institution policy and legislation relating to safeguarding and well-being of students;
- Promote self-reflection, autonomy and personal growth for students by enabling tutees to develop a sense of ownership;
- Working with others for the student's best interests by acknowledging the impact, limitations and boundaries of the personal tutoring role;
- Demonstrate diversity, inclusion and equality in relation to all members of the institution and the wider community;
- Undertaking continuing professional development and evaluate and reflecting on own practice

The University of Hertfordshire:

In an attempt to address the BAME attainment gap, the University of Hertfordshire and in particular the School of Engineering has launched in the academic year of 2018/2019 a personal tutoring initiative targeting especially first year students. Staff are allocated 10 Level 4 students and meetings are planned to happen once every month. The school has provided a guideline and approach for interacting with the students. While it is very soon to assess its results, the preliminary feedback provided by students have been motivating and encouraging.

While this initiative covers all Level 4 students, my personal interest is to know how this approach might impact on the BAME students in terms of their attainment and experience within the University. The results might not be seen until a few years down the line on their second and third years at University. From my first few meetings held during Semester A, it was quite evident that students valued the approach as an average of 7 out of 10 attended the meetings. While the discussions revolved around their academic experiences such as access to online resources, field visits, commuting difficulties, etc. and their experience within the University, a few exposed some more personal issues which could impact on their success.

My expectations from this initiative are very high and focussed in particular on the outcomes of factors like: Academic performance and personal growth, independent learners development, motivation, impact on self-esteem and confidence, progression and

employability, positive attitudes to learning, attendance and punctuality, feeling valued as a person rather as part of a group, etc.

Conclusion:

Assuming that tutors have access to information resources on tutoring, have the appropriate trainings and a wide range of support and wellbeing measures in place to help the active personal tutoring of each student, then, there is a possibility that, this action might benefit BAME student's attainment. The findings might be and not limited to:

- A students' sense of belonging and mattering at university can affect attainment, and personal tutoring has the potential to improve this; which can be done through the Raising Awareness, Raising Aspiration (RARA) approach to personal tutoring;
- Having an overt point of access through a personal tutor, creates a space for students to seek help and can have a positive impact on attainment;
- By having a systematic approach to personal tutoring, staff and students should feel clear about, and empowered by, their rights and responsibilities in this relationship, which should support student attainment positively;
- The role of personal tutors can be pivotal to shape, effect, and enable students to think differently about what futures are open to them, improving progression and attainment;

But the benefits of personal tutoring would be not largely limited to students, but it would also reflect in a better and more positive environment for the Tutor too. Without going into an in-depth analysis, I could argue that the benefits for the Tutor would be:

- Increases knowledge of individual students and their learning abilities;
- It would allow reflection to improve teaching and learning styles and better module management;
- A personal sense of pride by supporting learners to succeed and last but not least, it builds relationships which might have positive impacts on attitudes and behaviours of a tutee.

In addition, provided that the role as a personal tutor is well exercised, monitored and evaluated and that all the supporting services are at the student disposals, then their positive impact would reflect on the Institution itself. It would have the potential for:

- Promoting equality and diversity;
- Improving educational climate;
- Promoting safeguarding for all learners;
- Increase positive learner interaction and feedback;
- Improving students experience;
- Improve graduate employability;

References:

Ben-Ner A. & Amit Kramer, 2006, Do We Prefer People Who Are Similar to Us? Experimental Evidence on Giving and Work Behaviours. Carlson School of Management, University of Minnesota.

Cousin G. & Cuerton D., 2012, Disparities in Student Attainment (DISA).

Dent S. and Broglia E. (2017), Recognising the personal: Exploring the potential of Personal tutors to remedy attainment gaps.

Dr Meena Dhanda, Understanding Disparities in Student Attainment: Black and Minority Ethnic Students' Experience.

Earwaker, J (1992) Helping and Supporting Students: Rethinking the Issues. Bristol: Taylor and Francis.

Elizabeth Grugeon, Lorraine Hubbard (2006), Learning Through Dialogue, Routledge.

HESA, Staff at higher education providers in the United Kingdom 2015/16.

Imperial College: Guidelines for the Role of the Personal Tutor.

McFarlane K., 2016, tutoring the tutors: Supporting effective personal tutoring.

Mountford-Zimdars, D. Sabri, J. Moore, J. Sanders, S. Jones, and L. Higham, 2015, Causes of differences in student outcomes, Report to HEFCE by King's College London, ARC Network and The University of Manchester.

Myers, J (2008) Is personal tutoring sustainable? Comparing the trajectory of the personal tutor with that of the residential warden. Teaching in Higher Education

Purdy, N., 2013, Pastoral care: A Critical Introduction. Bloomsbury Academic.

Robert Innes, 2007, Dialogic Communication in Collaborative Problem Solving Groups, International Journal for the Scholarship of Teaching and Learning, Vanderbilt University (p.3)

Sean Coughlan (BBC Editor), Three quarters of employers 'require 2:1 degree'.

Stevenson, N (2009) Enhancing the student experience by embedding personal tutoring in the curriculum. Journal of Hospitality, Leisure, Sport and Tourism Education 8(2): 117–22.

The University of Sheffield: The Ethnicity Attainment Gap: Literature Review.

Thomas, L. (2006a) Postscript. In: Thomas, L, Hixenbaugh, P (eds) Personal Tutoring in Higher Education. Stoke-on-Trent: Trentham Books.

UCL, Personal Tutoring.

UniversitiesUK, Measuring and recording student achievement.

VanTassel-Baska, J. and Wood, S., 2010, the Integrated Curriculum Model (ICM), Volume 20, Issue 4, August 2010.

Wootton S., 2013, Personal tutoring for the 21st century. Published by the Further Education Tutorial Network (FETN).

USING PEDAGOGIC THEORY TO SUPPORT MY TEACHING PRACTICE: Encouraging Students to Reduce their Carbon Footprint Through "Knowing Your Numbers".

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Abstract:

The 2018 Intergovernmental Panel on Climate Change (IPCC) Report, supported by the UK 2018 Climate Projections Summary, warns *we have 12 years to reduce our CO2 emissions* before temperatures rise beyond the 1.5 C level beyond which, current evidence shows, climate change will produce substantial changes to global weather patterns impacting on all of the earth's bio-systems. If we are to meet both global and UK carbon targets there are roles for implementing low carbon technologies and for us all to be aware of our personal carbon footprint to make personal behaviour changes. As Module Leader for the L7 3-day Sustainable Energy Module within the Sustainable Planning MSc, I will address the issue of carbon reduction with the aim of encouraging students to be aware of their consumption and consider ways of making reductions.

My research explored how pedagogic theory could support my teaching practice as an opportunity to respond to the IPCC/Climate Change Projections Reports, using theories such as the Action Research Spiral (reflect, plan, apply, evaluate etc.) and to use Research Informed Teaching for continuous professional improvement delivering improved educational outcomes for students, as set out within the UH Vision and the Strategic Plan 2015-2020.

The research aim was to raise student awareness of their own carbon footprint and encourage behaviour changes through the strapline 'Knowing Your Numbers' as a trigger for raising awareness of personal behaviours and, hopefully, leading to actions to reduce personal carbon footprints. This research is set within a constructively aligned curriculum used the OBASL model with activities enabling students to move towards Biggs '*Extended Abstract* through transformative learning. Although this was a small-scale exercise, a mixed methods approach employing both quantitative and qualitative methods was used to gain a view of the level of knowledge prior to undertaking the foot-printing exercise, and the actual results as well as ascertaining how student awareness had been raised after the exercise.

Given their area of subject interest and level study it might be expected these students would have a higher level of awareness of sustainability issues than, for example, the general public. However, when asked no student knew their actual carbon footprint, which implies that general levels of awareness are low (although 3 of the guesses were close to actual calculations). Students made initial guestimates which were noted, then all calculated their actual footprint using the WWF calculator to ensure a standard measure. The results showed a wide variation of initial guesses from 2 to 2000 tonnes of CO2 per annum, while the majority of the actual figures were between 9 and 14 tonnes of CO2 per annum. The qualitative feedback showed students found the exercise very useful in raising awareness of their own consumption and that it had indeed transformed their thinking as in Biggs Level 4 Extended Abstract: *Learning that is understanding or making sense of reality, enabling the student to perceive the world differently.*

In linking pedagogic theory to my own practice through this research, I also conclude that it has given me a framework for reflecting on and improving my teaching practice and giving a theoretical underpinning to help ensure there are clear links between module content and learning outcomes. I would like to further explore this methodology as a platform for developing the exercise for other students as a stepping stone for a wider piece of research.

Attitudes to Climate Change, UK Carbon Emission Targets and why we need to meet them:

What is the case for undertaking this research and attempting to change students' behaviours responding to the IPCC Report by reducing their carbon footprint?

Following from the Rio Earth Summit and Kyoto Protocol the UK government along with many other nations made commitments to reduce CO2 emissions by at least 80% of 1990 levels by 2050 and contribute to limiting global temperature rise to as little as possible above 2°C. The Inter-governmental Panel on Climate Change (IPCC), monitors global actions and continually draws together a robust base of scientific research and data. This commitment has been enacted into UK law through the Climate Change Act. The Committee on Climate Change (CCC) has responsibility for monitoring our progress through the achievement of a series of carbon budgets and reports to the IPCC. These commitments are, therefore, legally binding on the UK.

While the UK met its first three budgets it is not currently on track to meet the fourth (covering the period 2023-27). The key points from the UK Met Office Climate Projections 2018 Report are shown in Appendix 1. The CCC states 'Meeting the 2050 target to reduce emissions by at least 80% of 1990 levels will require reducing domestic emissions by at least 3% per year. The 2018 IPCC report sets out the supporting evidence, conclusions and

recommendations (IPCC, 2018) and states "This will require existing progress to be supplemented by more challenging measures and means we have to take a more active approach to carbon reduction" this requires political will and greater actions by us all.

Who is Responsible for driving reductions UK Climate Change emissions?:

As the UK government has signed up to legally binding targets, it is the responsibility of government to both drive actions to reduce emissions and to report to the IPCC. It is therefore useful to clarify briefly how such structures work in the UK.

UK government policy is determined by elected representatives (MP's) from geographical constituencies by individuals casting their votes. Prior to a general election each political party produces a manifesto outlining their key priorities. This is an important point (oversimplified for the purposes of this article) because government policy and strategy are based on political direction influenced by the attitudes of voters. Therefore, if there is a general lack of will/interest in pushing for action on a particular issue (i.e. climate change) it is less likely to become a government priority. However, there are also opportunities for political leadership to be exercised if politicians are convinced through the provision of evidence and/or lobbying from business, education (including HEI's) and social perspectives as well as changes in technology and wider e.g. international factors. I believe HE has a critical role in promoting understanding of key issues for three reasons:

- It educates the next generation who will take up roles in a wide variety of sectors and will be most impacted by climate change
- It is a key reservoir and resource of research critical to reducing our emissions
- It is a consultee of government on key issues (such as climate change) and has a dialogue with government through the Department for Education

As an educator this informs my own role albeit at a small level.

Current Awareness of Climate Change & Carbon Emissions:

In order to explore the attitudes of students to climate change, it is useful to give context regarding general levels of public awareness. According to Corner, Whitmarsh & Xenias (2012) 'Scepticism in public attitudes towards climate change is seen as a significant barrier to public engagement'. Pidgeon (2012) states 'Although levels of concern and awareness about climate change have been rising in many nations over the past 20 years, climate change remains of low importance relative to other global or personal issues'. High profile campaigns such as Hugh Fearnley-Whittingstall's awareness raising of non-disposable coffee cups and fish waste, the 2017 Blue Planet 2 series and writings/speeches by Sir David Attenborough and campaigners such as George Monbiot arguably have a greater impact on UK public attitudes than presenting the evidence alone. It is questionable as to whether

attitudes are changed in the long-term and whether people translate their reactions into changes in personal actions, we may be saddened by the plight of polar bears while continuing to use our cars. Cognitive dissonance regarding climate change and our personal behaviours is an issue requiring in-depth exploration in its own right. For the purposes of this article, according to Helsing (2017) attitudes fall into two main categories: We Can Solve it (WCSI) and We Won't Solve it (WWSI). He takes the view that WWSI is closer to the truth. If action is to be taken on the challenge of climate change a WCSI approach must be encouraged.

I believe that if we are to reduce CO2 emissions it will be through building greater awareness of the issue, alongside blend of low-carbon technologies such as electric vehicles, improved efficiencies and moving to circular economies with greater re-use of our waste stream as well as behaviour change in trying to live a considerate lifestyle and reducing our carbon footprint where possible.

How Pedagogic Theory Supports my Teaching Practice:

I aim to use my teaching practice to raise awareness of students beyond general public levels and encourage behaviour changes through 'Knowing Your Numbers' as a basis for reducing personal footprints, hopefully also inspiring them to encourage others to consider our collective use of resources. I want to link this aim with a pedagogic underpinning and also use it to reflect on my own teaching practice.

For the 2018 Sustainable Energy module I used the title of the Carbon Footprinting exercise with the strapline "Knowing your Numbers". This utilises a comparatively well-known phrase and which has been part of a health awareness raising campaign in 2018 based on blood pressure and heart disease as well as for energy savings initiatives. I used this strapline because, as the health campaign states: *"By knowing your numbers, you can take action to make positive changes"* (Blue Health Advantage, 2018). Giving students the opportunity to discover their own footprint and how this sits within carbon emissions targets gives them the opportunity to take action to make positive changes. This is the outcome I hoped to achieve from the exercise.

Generally, my preferred teaching style is as a Facilitator (Gill, 2013/2018). Facilitators promote self-learning and help students develop critical thinking skills and retain knowledge that leads to self-actualization. I am more comfortable offering students a balance of research informed perspectives, particularly on subject areas and issues where there is a range of differing opinions or where the knowledge base changes over time. I encourage challenge and debate seeing learning as a collaborative process, I take a Constructivist approach as described by Richardson et al. I believe this approach sits well working with L7 students where their learning is predominantly through individual enquiry. They are formally assessed using 'Assessment Criteria Post Graduate Reports and Essays' in part through their abilities to:

- Integrate evidence effectively from a range of relevant sources,
- Draw together evidence and findings to support theory and to analyse the evidence
- Draw clear conclusions.

In my teaching in relation to climate change my aim is 'come off the fence' and to use knowledge and information to move student views to another position as set out in Biggs *Extended Abstract* through transformative learning as part of the Structure of Observed Learning Outcomes (SOLO) Taxonomy. In order to ensure this is a robust and academically defensible position I explored what pedagogic theories might offer to support this approach, with the view to enabling me to develop my teaching practice (and build confidence) underpinned by an informed approach.

Biggs Level 4 Extended Abstract

4. Extended abstract

This is learning that is understanding or making

sense of reality.

Learning enables the student to perceive the world

differently.

Figure 1. Adapted from Biggs SOLO Taxonomy to show Extended Abstract Level 4

Pedagogically Progressive theoretical approaches shape the UH curriculum and should inform our practice. At UH these take a participative approach with the teacher as a guide and the student gaining knowledge through active engagement and enquiry. Biggs (2003) argues that we must be mindful of developing all types of knowledge, whilst creating tasks/activities that increase a student's understanding progressively. Fung (2017) talks of building a 'connected curriculum' and Fry and Ketteridge (2003, 2014) set out the value of a creative/experiential approach. They set out a Systematic Approach (Fig 2), following a planning sequence with a feedback loop for changing and improving the design each time the course is taught.



Figure 2. Systematic Approach Model (adapted from Fry & Ketteridge)

A constructively aligned curriculum is based on offering relevant opportunities through which students can construct meaning and aligning these opportunities to achieve the learning outcomes. My opportunity to employ a Systematic Approach exists by reflecting on the 2018 module using this research and also by building in student feedback to make improvements to the 2019 module.

A Constructively Aligned Curriculum takes into account the learning outcomes using the Outcomes Based Approach to Student Learning (OBASL) Model (Prosser, 1990) which defines the intended Learning Outcomes, chooses teaching/learning activities likely to lead to attaining the outcomes and assesses students' learning outcomes to see how well they match what was intended.

In order to check alignment, the Learning Outcomes for the Sustainable Energy Module are as set out below with the relevant areas shown in *italics*:

- have an in depth understanding and knowledge of sustainable planning in relation to energy at a range of spatial *scales and the positive role that planning can play in adaptation and mitigation for climate change and conserving and managing natural resources*
- have an in depth understanding and knowledge of the relationship between planning and energy use, conservation and generation across a range of spatial scales and *the environmental impacts associated with energy generation and consumption*.
- have an in depth understanding and knowledge of the key theoretical and applied approaches that underpin planning research and practice in sustainable energy and the scope for and limitations of new technology in addressing energy and climate change issues.
- develop a critical understanding of the role that improved information can make in conserving energy

Wiggins & McTighe's Backward Design Process was also relevant, it sets out a three-step process:

- Identify Desired Results
- Determine Acceptable Evidence
- Plan Learning Experiences & Instruction

This process sits well with undertaking the piece of research using the carbon footprinting exercise. The outcome I wished to achieve was of wanting to raise awareness and I was able to design the exercise in order to achieve the desired results.

It was also very important to consider how students learn and whether this exercise gave opportunities for learning to take place. Kolb's Experiential Learning Cycle is a useful model employed to check opportunities for learning within this exercise. The cycle sets out a series of four steps to assist students learning: Concrete Experience, Reflective Observation, Abstract Conceptualisation, Active Experimentation. In relation to this exercise the following actions were taken mapped against the cycle:

- Concrete Experience The guessing exercise and writing on post-it notes
- Reflective Observation Students discussed their guestimates and gave feedback to each other
- Abstract Conceptualisation the students undertook the footprinting exercise, found out their numbers and recycled/re-used something.
- Active Experimentation the students talked about their numbers and their reactions as to how the facts matched with their thoughts. They also talked about what they could do to reduce their personal footprints.

The Research Methodology:

To undertake this research within the 2018 Sustainable Energy module, I used the title of the Carbon Footprinting exercise together with the strapline "Knowing your Numbers". This utilises a comparatively well-known phrase which has been widely employed. It has been part of a health awareness raising campaign in 2018 based on blood pressure and heart disease as well as for energy savings initiatives. I used this strapline because, as the health campaign states, *"By knowing your numbers, you can take action to make positive changes"* (Blue Health Advantage, 2018). This was particularly appropriate for the outcome I hoped to achieve from the exercise and would be a reference point for the students.

To determine my Research Methodology, I found Alan Bryman's 4th edition of Social Research Methods of particular assistance (Bryman, 2012). The book is aimed at my subject area of Geography/Environment and offers research methods from a social sciences perspective alongside the natural science model which is also used within my area. My enquiry is an example of where there is a rationale for employing social research techniques rather than a natural science approach.

My research took a Co-operative Enquiry approach (Heron, 1996). A carbon footprinting activity undertaken by students was already built into the programme for the module and has been undertaken in previous years, therefore Ethics Approval was not required. However, ethics requirements were adhered to in that all data was anonymous, students only participated if they were happy to do so and understood they could remove their data at any time and they only disclosed information of their choice, no individual could be identified through the data. The raw data was kept securely and destroyed at the end of the research.

This year I evolved the activity to engage wider discussions include the comparison and data and the student comments on its efficacy, using both the 2018 IPCC report and the alignment to Learning Outcomes. I employed the strapline "Knowing your Numbers", built in more time for general discussion than in previous years and encouraged the students to reflect on their learning.

Both qualitative and quantitative approaches were employed. At the start of the module I asked students to note their carbon footprint in tonnes of CO2 per annum. As no-one knew, they all made guesses. I also asked them to re-use something during a 24-hour period that they would have previously thrown away.

On Day 3 they undertook the carbon footprinting exercise, all using the World Wide Fund for Nature (WWF) carbon footprint calculator (footprint.wwf.org.uk) and compared the actual data to their initial guesses. They also noted down what they had re-used and discussed whether the exercise had raised their awareness of their own behaviours in relation to sustainable energy issues.

Results:

The results of the Carbon Footprinting exercise giving the initial guestimate and the WWF calculator were as follows:

Results Showing Initial Guess of Carbon Footprint and Actual Data Calculated (tonnes												
CO2 per annum)												
Initial	2.5	4.0	10.0	10.0	10.0	20.0	100.0	100.0	120.0	150.0	200.0	2000.0
Guestimate												
Actual	9.1	9.8	9.8	10.2	10.5	10.9	11.8	12.8	13.0	13.4	14.2	31.9
Calculation using												
WWF calculator												

Table 1 – Results Recorded



Figure 3 – Graph Showing Comparison of Guess to Actual Calculation* *for illustrative purposes the two figures at extreme end (2000/31.9) are not included in the graph but are shown in Table 1

From the data recorded, there were 12 usable responses. Two responses stated they considered their carbon footprint to be "average" but didn't quantify what they considered average to be. Table 1 shows the figures recorded. Figure 3 gives a graphical representation showing the spread of responses NB the two figures at the extreme end (2000 and 31.9) are not included in the graph to allow for a reasonable visualisation of the difference between the guesses and the actual calculation, highlighting the general lack of awareness of "Knowing your Numbers". A graph showing all the results is included as Appendix 2.

The size of the carbon footprint as part of the initial guess by students varied from 2.5 to 2,000 tonnes. Actual calculations showed that most students had a footprint of between 9.1 and 14.2 tonnes. One student had a far higher footprint at 31.9, due to a significant amount of long-haul international travel during the previous 12 months.

The WWF calculator gives results which show how an individual footprint compares with others in the world. It is marked up against a UK average of 13.56 tonnes and a world average of 5.28 tonnes. To avoid the worst impacts of climate change, the IPCC states we need to keep global warming below 2C and preferably at 1.5C. In its calculator, the WWF states that 'If everyone on the planet were allocated a 'fair share' of carbon emissions, each person should have a footprint of 1.05 tonnes by the year 2050' (footprint.wwf.org.uk)

One of the data sets shows a difference to the others due to long-haul flights. Flying is often the most climate-polluting activity for an individual to undertake. The WWF also state that 'even a single flight can dramatically increase your carbon footprint. Unless we see some major technological breakthroughs, people will ultimately have to fly less to reduce carbon emissions'.

The results of the Recycling and Awareness Raising exercise produced the following comments from students as qualitative data:

"I recycled a plastic bottle into a plant waterer". Student 1.

"I refilled and re-used my plastic bottle, I will keep doing this for as long as I can". Student 2.

"I re-used an empty plastic tray as a storage box". Student 3.

"My carbon footprint is huge, I must do something about it". Student 4.

As they calculated their individual footprints, the class room buzzed with conversation and comments. I observed that the activity had really engaged the students and stimulated some interesting debates and ideas. In the sum-up discussion all the students agreed this had been a useful and interesting exercise to undertake and that they had increased their knowledge level of their personal footprint from the level prior to undertaking this exercise.

Conclusions:

It can be seen from the results that the quantitative data recorded shows a wide variation of initial guesses on what students thought their footprint might be and their actual calculations. The comments recorded from the recycling exercise (and unrecorded class conversations), showed students had reflected on their own actions. Given the small scale of this research my conclusions can only be tentative at this stage however, I found that using a combination of research informed teaching and practical application did produce a raised level of awareness of individual behaviours in relation to carbon emissions and a desire to change behaviours.

Given this small sample and initial piece of research, my initial reflections are that further studies should be conducted and the research expanded. For further studies it could be valuable to conduct this same exercise over several years on the same Module with different student cohorts (producing a longitudinal study), or to conduct a similar exercise with students at the same level but within other subject areas as a comparison. It would also be valuable to conduct follow-up research to ascertain whether raising awareness using this method brings about lasting changes.

As a further reflection, in undertaking this process my own perspective has developed. I now appreciate the value of underpinning my own practice to appropriate pedagogic theories. Linking theory to practice in this way can offer useful models to act as ideas/checklists and ensuring what is offered to students is of appropriate academic standard. It also sits within the UH Vision: *The University is the UK's leading business-facing* university and an exemplar in the sector. It is innovative and enterprising and challenges individuals and organisations to excel. (www.herts.ac.uk).

References

Biggs, J. (2003). *Teaching for Quality Learning at University*. Buckingham. SHRE and Open University Press

Bryman. A. (2015). Social Research Methods. (5th Ed) Oxford University Press. Oxford

Committee on Climate Change (2018). UK Carbon targets 2018.

Corner, A. Whitmarsh, L. Dimitrios, X. (2012) *Uncertainty, scepticism and attitudes towards climate change: biased assimilation and attitude polarisation*. Climatic Change. Volume 114, <u>Issue 3–4</u>, pp 463–478

Fry, H., and Ketteridge, S. (2003). *Handbook for Teaching and Learning in Higher Education*. London. Psychological Press.

Fry, H. Ketteridge, S., and Marshall, S. (2014). *A Handbook for Teaching and Learning in Higher Education: Enhancing Academic Practice*. Oxon. Routledge.

Fung, D. (2017). *A Connected Curriculum for Higher Education*. London. UCL Press.

Helsing, D. (2017) Blues for a Blue Planet: *Narratives of Climate Change and the Anthropocene in Nonfiction Books.* Evolutionary Studies in Imaginative Culture Vol. 1, No. 2 (Fall 2017), pp. 39-57: Academic Studies Press

Intergovernmental Panel on Climate Change (2018): *Global Warming of* 1.5°C, an IPCC special report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. www.ipcc.ch

Gill, E. (2013/18). What is Your Teaching Style? 5 Effective Teaching Methods for Your Classroom. EDU, Concordia University, Portland.

Heron, J. (1996). Co-operative Enquiry: Research into the Human Condition. Sage, London.

Kolb, D. A. (1984) Experiential Learning: *Experience as the source of learning and development* Englewood Cliffs, Prentice Hall.

Pidgeon, N. (2012) Public understanding of, and attitudes to, climate change: *UK and international perspectives and policy*, Climate Policy, 12:sup01, S85-S106, DOI: 10.1080/14693062.2012.702982

Prosser, M. (2016). *Outcome based Approach to Student Learning*. Centre for the Advancement of Teaching & Learning. University of Hong Kong.

Richardson, V. (2005) Constructivist Theory in Education.

UK Met Office (2018) UK Climate Projections 2019 Report.

University of Hertfordshire Strategic Plan 2015-2020

Wiggins, G and McTighe, J. (2005) Understanding By Design 2nd edition: *Backwards Design*. ASCD, Virginia, USA. *ch 3. pp13-35*.

WWF (2018) Carbon Footprint Calculator. Footprint.wwf.org.uk

THE POSSIBILITIES AND PROBLEMATICS OF BECOMING A COMPASSIONATE EDUCATOR: An ethnographic perspective.

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Abstract:

Inspired by Freire's (1998) transformative intellectual and Duckworth's (2017) grittiness, this paper critically reflects on the possibilities and problematics of positioning compassion at the heart of my practice. A growing body of work recognises the centrality of compassion in teaching. This emerging literature contends that a compassionate pedagogue can positively impact on the intellectual growth of students, their engagement and ultimately their academic success. Using reflective accounts from an autoethnography, this paper contributes to this debate by arguing that being a compassionate pedagogue has the potential to transform teacher-student relationship and foster greater perseverance among students. However, digging deeper into these possibilities reveals the limits of being a compassionate practitioner. Specifically, it throws up serious questions around students becoming overly dependent on the teacher, instead of setting them on a clear path towards self-determination. Equally important, incorporating compassion in teaching can lead to empathic distress, over-nurturing and compassion fatigue and dissonance, if care is not taken. Taken together, a pedagogy of compassion, useful though it might be in augmenting positive affect, fails to articulate the complete story behind students' intellectual journey and success, particularly the internal dispositions required for academic success.

Introduction

We can never send back our blueberries. We take them rich, poor, gifted, exceptional, abused, frightened, confident, homeless, rude and brilliant. We take them with ADHD, and English as their second language. We take them all. Every one. And that's why it is not a business. It's a school. (Cuban, 2004, p. 4).

This extract from Cuban's *Why Schools Can't Be Businesses*, eloquently captures not just the challenges involved in being an educator, but also puts a spotlight on the humanitarian ideals and non-commercial values at the core of teaching. The crux of Cuban's thesis is that

teaching is more than just an intellectual project. Inherently, teaching is a caring profession; a profession which recognises the intrinsic value in all learners. In taking this position, Cuban puts a high premium on the affective domain of teaching. His emphasis reflects Freire's (1998) transformative intellectual – that is, teachers embodying humanitarian values of love, kindness, patience, tolerance and humility among others.

Following Freire, several writers in recent times have raised concerns about the underemphasis on the affective aspects of teaching. P.Gilbert (2013), for example, points to a lack of compassion and of care for each other because we have become trapped by a competitive world that only seeks efficiency and profit maximisation. Similarly, Ball (2008) refers to an era of constant inspection and auditing of education, which apply neo-liberal principles to the education sector. This performative conception of education, for many writers, has contributed to inhibiting the development of a compassionate culture in educational institutions (P.Gilbert, 2013).

In response to this perceived lack of emphasis on humanitarian values, a growing body of literature have championed the notion of teachers becoming more compassionate in their practice (Valverde, 2010; Gibbs, 2017). At its most basic, proponents of a pedagogy of compassion, e.g. Hao, 2011, contend that compassion needs to be positioned at the heart of teaching to increase levels of motivation, counter polarisation, foster students' intellectual development and engagement and ultimately academic success. Vandeyar (2016), for example, views compassionate pedagogy as a panacea for resolving student disengagement, whilst Hao (2011) sees it as useful in maintaining retention rates at HE institutions. And for Freire (1998), compassionate pedagogy is requisite for problem framing, conscientization and social and perspective transformation.

Taking theoretical inspiration from Freire (1998) and Duckworth (2017), this paper seeks to contribute to this burgeoning debate on situating compassion within one's educational practice. To do this, I begin with a brief understanding of compassion. I will then discuss some notable theories of compassion in teaching. Following this, I draw on an autoethnography to tease out the possibilities and problematics of attempting to put compassion within my practice. In closing, I provide some thoughts on the insights gained from this self-evaluation.

Conceptualising compassion:

There is no definitive understanding of the term 'compassion'. In some writings, compassion is used synonymously with empathy and sometimes presented simply as empathy (Bloom, 2018; Goleman, 2017). Seppala (2017), for instance, views compassion as an emotional experience of another person's feelings. For P. Gilbert (2013, p. xiii), compassion is simply "a basic kindness, with a deep awareness of the suffering of...other living things, coupled with the wish and effort to relieve it". From a different perspective, Goleman (2017, p. 4) identifies three forms of empathy, what he calls 'the empathy triad', which are inextricably

bound up with compassion: cognitive empathy, which is about understanding another person's point of view; emotional empathy, relates to feeling what someone else feels; and empathic concern, focuses on the ability to sense what another person needs from us. For Goleman, all three forms of empathy are at play when we feel compassion. For instance, when we feel compassion, we feel distress when we observe someone else in distress and because of that we want to help that person (Goleman, 2017). Therefore, compassion entails observing, noticing and acting in response to what is felt to alleviate suffering or pain (DeSteno, 2018; Goleman, 2017).

Theorisation:

Rousseau (1762/1979) provides one of the earliest accounts on compassion in education. In *Emile*, Rousseau made an explicit appeal to educators to exemplify compassion. Viewing compassion as a unifying force for personal and social transformation, he posited that individualism divides people, but compassion arises when individuals create bonds of genuine mutual concern through shared sufferings. He proposed that the desire for self-interest, one that is firmly grounded in reason, was not what unites humans. Rather, the uniting bond among humans is a profound common feeling and commitment towards alleviating the suffering of others. For Rousseau, to improve the personal and social experiences of others involves understanding how individuals' deep feelings for others counter self-interest. Hence:

When the strength of an expansive soul makes me identify myself with my fellow, and I feel that I am, so to speak, in him, it is in order not to suffer that I do not want him to suffer. I am interested in him for love of myself, and the reason for the precept is in nature itself, which inspires in me the desire of my well-being in whatever place I feel my existence. (Rousseau, 1979, p. 235)

Implicit in this thread from Rousseau is a recognition of our common humanity and inherent interconnectivity. Also, an awareness of this interconnectivity ought to elicit empathic understanding of others. Equally evident is the conception of compassion as a necessary human value for countering human suffering. It is this emphasis on core human values that formed the basis of Freire's pedagogy of compassion.

Freire's (1998) blueprint for a compassionate pedagogy focuses on teachers embracing what he connotes as the transformative intellectual. By transformative intellectual, Freire means teachers who are deeply committed to and engage in social change by making the political more pedagogical. To garner social change, the transformative intellectual needs to embody humility, tolerance, radical love and courage. These attributes, for Freire (1998), are indispensable to teachers if they are to instil belief in learners to overcome their economic, social and political struggles. Education, for Freire (2006), entailed collaboration between the educator and the learner, constructing knowledge through dialogue. This dialogical approach to teaching, is characterised by love and commitment to the learners. The act of love from the transformative intellectual is a commitment to liberate learners and humanise themselves as part of the struggle (Freire, 1998). In view of this, social transformation is possible through the dialogical process between the teacher and the learner, which elevates the learners to a condition of compassion.

Freire's clarion call for teachers to adopt a pedagogy of compassion prompted Vandeyar (2016) to undertake an empirical analysis of the value of compassion in teaching within the South African context. Using a single case study approach, Vandeyar (2016) found that the implementation of a pedagogy of compassion within the South African system acts as a force for dismantling polarised thinking and addressing and transforming educational and social change. The argument from these findings is that a pedagogy of compassion enables learners to develop into active critical citizens and empowers them to exert influence on their own world. Thus, for Vandeyar (2016), teaching is not a purely cognitive enterprise, but also an inherently class act of human compassion.

Situating compassion within my practice:

An autoethnographic approach

To shed light on the processes taken to situate compassion within my practice, I opted for autoethnography (Chang, 2008; Wolcott, 1999). Autoethnography simply explores the self within culture; it is a personal narrative and interpretation; and a search for understanding through the self (Chang, 2008). With reference to my practice, I wanted to be acutely tuned-in to my experiences and meaning systems by becoming critically more aware of how my own assumptions, biases and preconceptions influence my teaching. Utilising autoethnography is akin to reflection-in-action and reflection-on-action espoused by Schon (1983). In my case, engaging in reflection-in-action, for instance, entailed interrogating my experiences, connecting with my thinking processes and feelings and attending to the theories that I use, with the aim of building new understandings to inform my practice as it unfolds.

Like (Valverde, 2010) who used an autoethnography to explore his practice, the substantive focus of my analysis was not on the compassionate acts by my students, as evident in some works in the field, e.g. T. Gilbert (2017). Instead, the main focus revolved around my attempts to consciously act towards my students in a more compassionate manner. Adopting autoethnography helped to generate a grounded and rich vein of data, which directly informed my day-to-day teaching. This methodological lens positioned me as both the researcher and the researched, interrogating my ideals, preconceptions and the strategies that I employed in my teaching. At the same time, I drew on psychological tools to illuminate my experiences of becoming compassionate in practice. I now detail the tactics employed to position compassion within my practice.

Unfreezing my mind

The initial stages of becoming compassionate in my practice called for unfreezing my mind. Drawing on Knowles (1996), unfreezing the mind involves confronting and transforming personal beliefs and biographies and hypotheses that constrain any efforts to becoming more compassionate. So, at the outset I became critically aware of the litany of beliefs, assumptions and prejudices that needed to be interrogated and shifted. Shifting these assumptions were necessary because throughout my early years, I had accumulated a large reservoir of fixed habits and patterns of thought regarding what makes for a good student. Delving a bit deeper into the key literature on compassion, most notably Freire (1998) and Goleman (2017), acted as an impetus for subjecting my strongly held assumptions and subjectivities under scrutiny. For instance, Freire's ideas around the transformative intellectual made me question the personal beliefs that had inhibited me from cultivating an authentically compassionate culture within my practice. Given that empathy is inextricably linked with compassion, Goleman's empathy triad framed the lens through which to assess my capacity to sense not just what my learners might be feeling, but also what they might need from me. The insights from Freire and Goleman, together, revealed that rising through the ranks had affected my ability to maintain personal connections (Goleman, 2017) and contributed to me becoming inflexible in my appraisal of students.

Take, for example, what constitutes a good student. On closer inspection, I am aware that being consistently labelled a dedicated student during my formative years had coloured my conception of what a dedicated student is. As a consequence, I tended to label students as either diligent or non-committed, without getting to know the biographies and contextual factors behind their experiences. The extract below reinforces this tendency:

I'm not sure if my students are actually serious about their education. I'd like to think this is a second chance uni. So, I expect students to maximise the unique opportunities they've been given to get an education. I'm really not convinced by these excuses for not reading the materials from previous sessions. There are no excuses! (Journal Entry, 15/10/2018)

It's no rocket science when it comes to academic success. Only you are responsible. No one is gonna do it for you. Your effort counts twice. If you fail to put in the effort, you stand no chance of excelling. (Journal Entry, 09/11/2018)

There are two fundamental beliefs that are evident in these extracts, which have contributed to blocking the full expression of my empathic imaginations. The first has to do with the unwavering faith in grit and self-determination as personal attributes requisite for academic success. And the second, is the conviction that students ought to rise above the complications in their lives through self-discipline and sacrifice to realise their ultimate academic goals. However, as motivational as it might seem, these rigid personal convictions succinctly illustrate Ruttan's (2015) experimental observations that it is harder to empathise with people if one has been in their shoes. In my case, achieving good academic outcomes despite personal hardships had numbed my feelings and blocked my empathic imaginations. My prior experiences could have created a shared experience and consequently breed empathy towards my students. Yet the fact that I handled 'tough times' during my undergraduate years made me more rigid and unempathetic in my views. In view of this, navigating around these deep-rooted preconceptions called for unfreezing of my mind in order to become more open to new possibilities, namely thinking and doing things differently. However, this process of unfreezing my mind has not been straightforward. For instance, on many occasions I experienced dissonance - shattering one's preconceptions, whilst at the same time experiencing a sense of discomfort in the process, as expressed in the following reflection (Vandeyar, 2016):

What an encounter! I concede that not everyone would value the principles that I value. But it's hard to get my head around it when it comes to academic success. For me, there is no other way except grit, desire, discipline and sacrifice. Maybe, I just need to be true to myself and embrace my own authenticity. (Journal Entry, 26/10/19).

Knowing me, knowing you

To develop into critically compassionate educators, Hao (2011) makes a strong case for getting to know the learners that we teach. He proposes that for disadvantaged learners, the insights gained from getting to know them would be essential for addressing their pedagogical needs and supporting them in their academic journey as they navigate around a complex set of socio-economic circumstances. Following Hao's charge, I created a brief activity to enable me to gain some useful insight into the contextual factors surrounding each of the students that I teach. The activity I utilised entailed students noting down three key things that they would REALLY like me to know about them on small pieces of coloured cards.

Looking back, it allowed me to develop, albeit in a small way, an understanding of the stories behind each student's circumstances. All my students chose to highlight some significant events in their lives, which have stuck with me to date. Much like Cuban (2004), students had different but challenging circumstances to juggle alongside their commitment as students. For instance, there are young mothers of three; student who had been home-schooled; young single mothers with 2 – 4 children; a father-to-be who had just turned 22; a young carer; young newly married women; students who had just lost someone dearest to them; fathers who had just moved to the UK; some with dyslexia and severe epilepsy; students who had deferred the course and/or transferred from another university; students with long commute, night shift workers and 3 jobs.

Comparatively, my current students' characteristics were completely distinct from the students that I had taught in previous institutions. Enlightened by this newfound knowledge,

it was crucial that I remained open, understanding and willing to consider pedagogical accommodations to support my students, for instance, thinking flexibly when setting and completing weekly assignments for each lecture/seminar. Garnering information about the contextual background of my students put things into perspective. For instance, this information allowed me to make sense of why particular students had requested for extensions for submitting their formative assessment. With this knowledge, I extended deadlines for any students begun to ask for the deadlines to be extended. This also gave the impression that future deadlines would always be extended. What is more, rather than take it for granted that they were onboard with how the module was being delivered, I devoted a considerable amount of time to one-to-one sessions as a way of checking their conceptual understandings and using the opportunity to track their academic progress.

Appreciative inquiry

Though a form of organisational development process, appreciative inquiry focuses on strengths rather than fixing weaknesses. It aims to draw out the best of 'what is'; it can ignite the collective and individual imagination of 'what might be'; it builds on strengths for future work and it increases confidence (Boniwell, 2012, p. 158). In my case, adopting appreciative inquiry as part of becoming a compassionate pedagogue consisted of being a good-finder. That is, constantly striving to see the positive aspects in students' work and providing affirmations for what they have done.

To contextualise appreciative inquiry, I devised a case study for discussion on CANVAS. Students were tasked with commenting on the case study. The first two contributors to the discussion board received feedback within 10 minutes of posting by affirming students' effort and initiative. Choosing to focus on effort-based praise rests on the notion that it is more robust than ability-based praise (DeSteno, 2018). Similarly, focusing on effort-based praise reinforces the belief that my students' efforts and not their immediate success, are worthwhile. Adopting this approach to feedback seems to have induced positive emotions and empowered the other students to contribute to the discussion thread. In the end, 30 out of 31 students contributed to the discussion board. But the decision to comment on every thread on the discussion board was both time-consuming and mentally and physically exhausting as I spent hours to read and think about something meaningful and positive to highlight in each thread, even ones that were not particularly insightful. While cause and effect cannot be easily inferred from this appreciative inquiry, I can speculate that my students increased in their willingness to actively respond to subsequent discussion tasks. This observation echoes DeSteno's (2018, p. 133) point that students who are "led by teachers who are warm and caring regularly show higher levels of intrinsic motivation".

Facing down reality

80% of success in life is showing up...staying true to our commitments even when we're not comfortable...When you permanently turn your back on a commitment – your effort plummets to zero (Duckworth, 2017).

This autoethnographic critical reflection on compassion began in September 2018 and culminated in December 2018. Consciously being compassionate during this period seems to have enhanced the rapport that I had with students and the overall teacher-student relationship. This was particularly reflected in students' willingness to speak openly about their academic struggles and how they could be supported. For instance, in one-to-one sessions, students tended to ask the right sort of questions to consolidate their understanding and to refine their assignments. Similarly, gaining insight into some of the hurdles that my students faced on a regular basis invoked deep feelings, akin to what Bloom (2018) describes as empathic distress – suffering at the suffering of others. Yet, not being able to help alleviate their conditions led to a feeling of a sense of helplessness, frustration and indignation. On a number of occasions, my indignation was directed towards the system, though on reflection the system is not to blame for many of the cases that I encountered.

Students modifying their behaviours, e.g. working harder and completing the requisite readings before lectures, due to a caring and attentive teacher, all make sense. However, these behaviour modifications still do not quite unearth the question of why regularly showing empathic concern failed to transform some students' disposition towards academic work. For example, there were still students who rarely turned up for lectures and seminars; students who failed to turn up for one-to-one sessions; students who did not submit formative and summative assessments, despite the extensions they received; students who did not do the required readings before and after sessions; and students who submitted unsatisfactory work in their final assessment. This, for me, brings into sharp focus one of the limits of being compassionate in a field such as education. And this brings me to the vignette from Duckworth (2017) which I referenced at the inception of this final section.

Duckworth (2017, p. 269) theorises that "what we accomplish in the marathon of life depends tremendously on our grit – passion and perseverance for long-term goals". Implicit in this thesis is an attempt to shift the determinants of academic success from external forces - the teacher, institution and contextual circumstances to factors within the control of the individual. These so-called internal dispositional factors, which Duckworth alludes to, seem to have more explanatory power when accounting for students' level of engagement and educational outcomes. Unsurprisingly, Duckworth is not alone in extolling grit and its constituents as predictors of educational success. Much of the psycho-social literature on achievement and success, identifies internal dispositions including resilience and perseverance (DeSteno, 2018), effort and self-efficacy (Dweck, 1999), focus (Goleman, 2013) and discipline and deliberate practice (Ercisson, 1993) as non-negotiable personal traits necessary for educational success, regardless of the cards that students have been dealt. Reflecting on this hard-hitting truism about what it takes to be successful, prompts me to re-think the journey that I have charted in the past few months embedding compassion within my practice. This insight has compelled me to concede that perhaps, the biggest impediment to academic success is not the lack of compassion/empathy in teaching. Rather, it is the lack of grit, commitment and consistency of effort over the long run.

Conclusion:

This paper sought to critically reflect upon the possibilities and problematics of becoming compassionate in my practice. The leitmotif in the burgeoning literature in the field revolves around the thesis that a pedagogy of compassion maintains students' retention rates, fosters their intellectual development, increases engagement and motivation and ultimately, academic success. But rather than wholly accept this grand view as given, it is essential to question the validity and pragmatics of a compassion-oriented practice. And this is what my reflection has sought to do, using autoethnography. Despite its criticisms (e.g. autoethnography can lead to self-indulgence, over-introspection and excessive individualisation), my autoethnography reveals that becoming a compassionate educator creates possibilities for acquiring a rich vein of insights into students' contextual circumstances and for transforming teacher-student rapport and relationship. Conversely, positioning compassion in one's educational practice has its own problematics. For instance, it can lead to compassion fatigue and empathic distress. But even more importantly, becoming a compassionate educator is still insufficient to compensate for students' own internal dispositions - the grit, self-discipline, commitment and consistency of effort, which are quintessential to excelling in academic work.

References:

Bloom, P. (2018). *Against Empathy. The case for rational compassion*. London: Penguin Random House.

Boniwell, I. (2012). *Positive Psychology in a nutshell. The science of happiness*. England: Open University Press.

Chambliss, D. (1989). The mundanity of excellence. Sociological Theory 7.

Chang, H. (2008). Autoethnography as method. Walnut Creek, CA: Left Coast Press.

Cuban, L. (2004). *The Blackboard and the Bottom Line: Why Schools Can't Be Businesses*, USA: Harvard University Press.

DeSteno, D. (2018). *Emotional Success. The motivational power of gratitude, compassion and pride*. London: Bluebird.

Duckworth, A. (2017). *Grit. Why passion and resilience are the secrets to success*. London: Vermilion.

Dweck, C. (1999). *Self-theories: Their role in motivation, personality and development*. Philadelphia: Psychology Press.

Ericsson, A. (1993). The role of deliberate practice in the acquisition of expert performance, *Psychological Review* 47, 273-305

Freire, P. (2006). *Pedagogy of the oppressed*. (Ramos, M. B., Trans.). New York, NY: Herder & Herder.

Freire, P. (1998). *Teachers as cultural workers: Letters to those who dare to teach.* Colorado: Westview.

Gibbs, P. (2017). *The Pedagogy of Compassion at the heart of Higher Education*, England: Springer.

Gilbert, P. (2013). *The Compassionate Mind*. London: Constable.

Gilbert, T. (2017). What Compassionate Group Work Looks Like in a UK University, in P. Gibbs (ed.) *The pedagogy of compassion at the heart of Higher Education*, England, Springer, pp. 189-202.

Goleman, D. (2017) What is Empathy? Empathy. BHR *Emotional Intelligence series*. pp. 1-11. Boston: Harvard Business Review Press.

Goleman, D. (2013). Focus: The hidden driver of excellence. New York: HarperCollins.

Hao, R. N. (2011). Critical compassionate pedagogy and the teacher's role in first-generation student success. *New Directions for Teaching and Learning*, no. 127, Wiley Online Library. Accessed 10/11/2018

Knowles, M. (1996). Andragogy: an emerging technology for adult learning, in Edwards, R., Hanson, A., & Raggatt, P. (eds.) *Boundaries of Adult Learning*, London: Routledge.

Rousseau, J. (1762, 1979). *Emile or On Education-Book* Four. (Trans. Allan Bloom). New York, NY: Basic Books.

Ruttan, R., McDonnell, M. H., & Nordgren, L. (2015). "Having 'Been There' Doesn't Mean I Care: When Prior Experience Reduces Compassion for Emotional Distress", *Journal of Personality and Social Psychology* 108, no. 4, 610-622.

Schon, D. (1983). *The Reflective Practitioner: How Professionals Think in Action*. USA: Basic Books, Inc.

Seppala, E. (2017) Why compassion is a better managerial tactic than toughness. Empathy. BHR *Emotional Intelligence series*. pp. 13-27. Boston: Harvard Business Review Press.

Valverde, C. (2010). Toward a Pedagogy of Compassion: Extracting Principles of Education from Teaching a High School Multicultural Literature Class. LMU/LLS Theses and Dissertations. 271.

Vandeyar, S. (2016). The Teacher as an agent of meaningful educational change. *Educational Sciences: Theory and Practice*.

Wolcott, H. F. (1999). *Ethnography: A way of seeing*. Walnut Creek, CA: AltaMira.