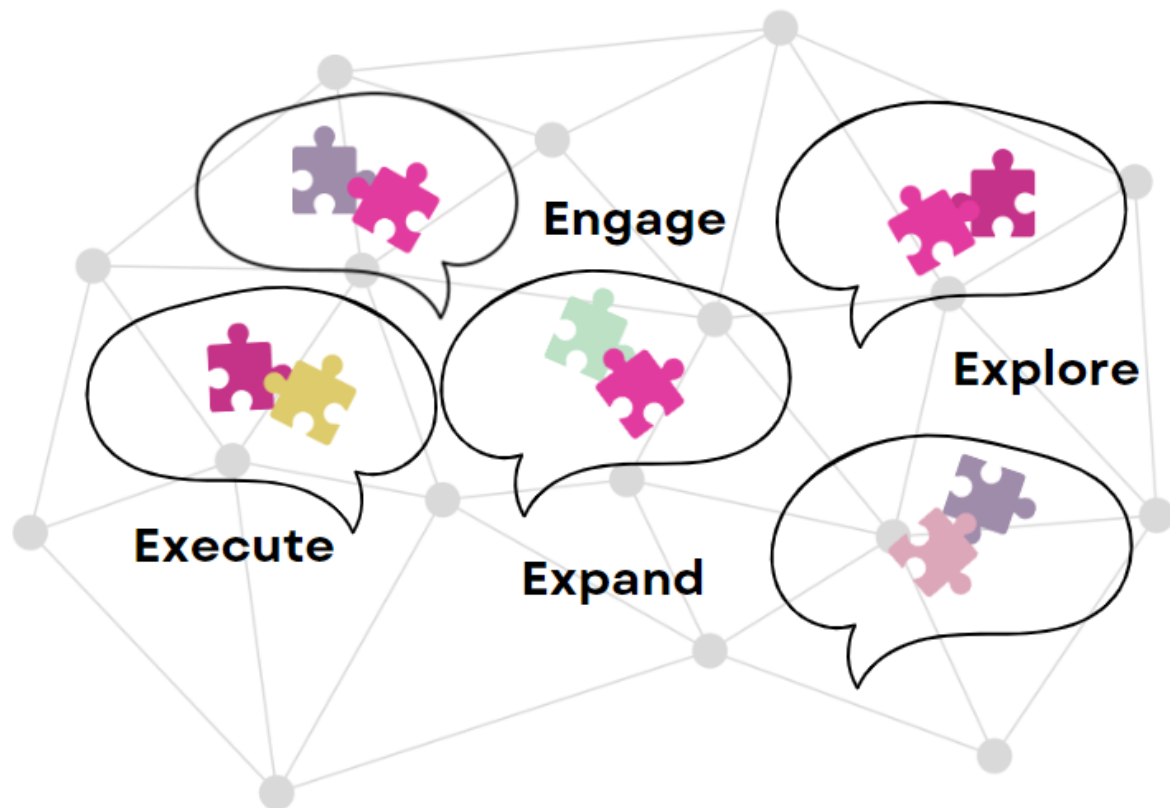


Developing Phenomenal Learning: A toolkit for implementing Phenomenon-Based Learning as part of a future-proofed SDG HE curriculum



Project Report



Project Partnership

This report is an output from a Collaborative Enhancement Project supported and funded by QAA Membership. The project is led by The Staffordshire Centre for Learning and Pedagogic Practice (SCoLPP) at Staffordshire University in partnership with Harper Adams University. Find out more about Collaborative Enhancement Projects on the [QAA website](#).

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Glossary of Terms

SDG - UN Sustainable Development Goals

PESTLE – Political, economic, social, technological, legal and environmental

PhBL- Phenomenon-based Learning

Introduction

Having drawn upon global sources of evidence, including [Universities of the Future](#) (EU/Erasmus 2018-2021), the aim of the project was for two contrasting providers – Harper Adams University and Staffordshire University – to collaborate in implementing, interpreting and testing PhBL approaches within subject areas and beyond, across programme areas at different academic levels. As context, Harper Adams University is a small and specialist provider located in rural Shropshire, whose courses relate specifically to food production and technology, animal health and wellbeing, and their contribution to sustainable living environments for our planet's inhabitants. Staffordshire University is a post 92 university with the main campus based in Stoke-on-Trent in Staffordshire. A medium-sized HE provider, Staffordshire offers a range of undergraduate and postgraduate courses across the sciences, professions and arts.

PhBL was initially seen as a pedagogy with potential, but a pedagogy that was not well defined within the context of UK Higher Education. We were drawn to some of its features: its link to investigating issues which mattered to students, a student led learning approach, the idea of learning with students and having a facilitative pedagogy, and the potential fit with themes of sustainability and the UN SDGs.

Our aim was to take the principles of PhBL and consider how they could be used. The contrasting nature of the partner organisations in this project provided an interesting space to test and evaluate different interpretations with the view to generating a toolkit that would reflect multiple contexts. The project embraced students as partners; students helped us to actively interpret the pedagogy. Together, we explored, discussed, workshopped, and puzzled over this approach to learning. At the end of the process, our findings were embedded in a suite of reusable resources which are intended to offer a starting point for others to take this approach forward.

Methodology

10 students were recruited from each institution (the project involved 20 students in total). Students were paid for their involvement to reflect their time commitment and, as a related point, to ensure that the project was accessible, and to ensure that the project would be fulfilled. Students attended a briefing to ensure that they were clear of what was expected before committing. The benefits of participation were explained to students as:

- *A chance to reflect on your studies and how to make it work better for you*
- *Work with other students from different areas of the University*
- *Be part of a change process you can use on your CV to demonstrate collaborative skills*
- *Learn about exciting ideas for learning and teaching and help shape these across the University*
- *Help to create student-friendly learning resources*

All students were given an information sheet (See Appendix A) and signed a consent form (See Appendix B).

The Harper Adams cohort included students from different disciplines including Animal Sciences, International Business, Agriculture, Geography, Zoology and Veterinary Nursing at levels 3-6. The group was evenly divided between those identifying as male and female. Other characteristics were also varied e.g., commuter students, mature students, neurodiversity.

The Staffordshire cohort included students from levels 4-7 from a variety of disciplines including Criminology, Biochemistry, Engineering, Early years, Design, Sports science, Policing and others. The group was predominantly female, a mixture of commuting, international and local students. All applications to join the programme were made anonymously.

Once students were recruited, we created six workshops which were offered to both groups concurrently. We knew what each workshop was to cover (since each was guided by a question about PhBL), but the detail was created as the project progressed. This iterative planning approach enabled the team's learning about PhBL to be actively embedded. We held planning meetings ahead of each session to compare ideas for the content or framework of the session as well as the facilitation methods that we would use ourselves.

Stop the Clock Format

We needed students to be in the position to critique a pedagogy that they had not previously experienced. A "Stop the Clock" format for the workshops was employed. This format offered students a "micro" experience of PhBL after which we 'stopped the clock' and students took on a more analytical role; reviewing and reflecting on one of the following questions per workshop:

- What does a quality PhBL learning experience look like?
- What is needed to turn the PhBL dream into reality?
- What are barriers to engagement?
- How can barriers be overcome?
- How should PhBL be assessed?
- What should go into the Project SDG 4.7 Toolkit?

For each question, the students completed activities which produced artefacts to represent their discussions. These artefacts were collated to inform understanding about PhBL and acted as a stimulus for the toolkit design.

A variety of facilitation techniques were used to support this artefact generation:

- The sharing of experiences between workshop members
- Exploring ideas and thinking big (i.e., trying to set aside the constraints of 'normal' research to consider big questions)
- Playmobil and Lego Serious Play
- Mind Mapping
- Group discussion
- Poster creation
- The development of graphics
- Presenting ideas back to peers for feedback
- Modelling uncertainty and experiencing moments of pause
- PESTLE analysis

Throughout the workshops we referenced the Sustainable Development Goals and especially 4.7 to continually raise awareness and reinforce the project orientation towards creating a quality educational experience.

Summary of outputs: Our interpretation of PhBL

This section details the findings from the project and is aligned to the project toolkit which encapsulated those findings.

A working understanding of PhBL in Higher Education

Put simply, PhBL is learning that is based around an event or a phenomenon. Learning is framed around, provoked, and stimulated by current phenomena, events, concepts, or occurrences. It is enquiry-based and student-led. Discipline is viewed within the context of a phenomenon and discipline-specific knowledge is not artificially lifted, segregated into blocks, or placed into topics, but explored as it applies to real-world phenomena. This approach responds in real-time, with students as partners, to the societal wicked issues¹ that we should be preparing graduates for and fits with the increased civic agenda of higher education institutions to reduce social inequalities.

Initially, we found it was challenging to define PhBL in an accessible way. We debated definitions almost every time we met as a project team, considering new learning with each iteration. We concluded that answering the question “What is Phenomenon Based Learning?” involved generating a clear description, and it also required us to explicitly differentiate it from other forms of learning – particularly those in a family of enquiry or research led facilitative pedagogies.

With roots in traditional folk teaching in Finland and based on work by Vygotsky and Dewey, PhBL was introduced formally into the school curriculum in Finland in 2016.

Finland's [Phenomenal Institute](#) states that in phenomena-based learning and teaching, “holistic real-world phenomena provide the starting point for learning. The phenomena are

¹ Coined by Keith Grint, a wicked issue is a problem where, given the social complexity and diversity of stakeholders, there is no immediate solution or resolution. Antithesis of tame issue.

studied as complete entities, in their real context, and the information and skills related to them are studied by crossing the boundaries between subjects”.

A global search on PhBL revealed some adoption at school level (in addition to Finland) but very little currently in HE. Isolated examples were found in Australia, US, and Spain. Discussion with [Elizabeth Marsland](#), [John Spiegel](#) and [Donna Fields](#), as practitioners using PhBL in HE was extremely helpful and informative. Donna Fields use of “What if...?” discussion prompts and Elizabeth Marsland’s use of the Enquire, Engage, Expand and Execute model to frame her approach to phenomena were particularly useful.

Points of difference – a family of methods

With our students we gained confidence in the describing features of PhBL, and yet as we began to engage with colleagues and with the wider community, we received questions about the difference between PhBL and enquiry-based learning and problem-based learning. To assist this conceptualisation, one of the tools is an explicit [summary of the features of all three approaches](#) to pedagogy. By setting out these approaches side by side their distinct features become clearer, as do their similarities. It is our recommendation that PhBL is considered part of a family of investigative pedagogies.

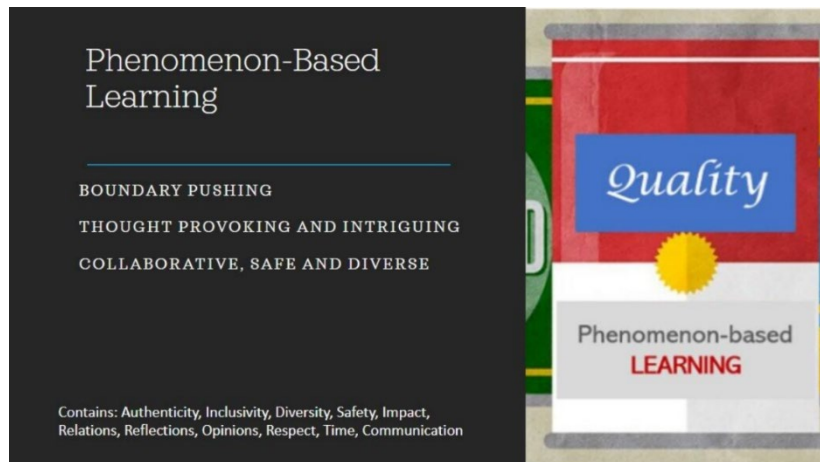
Another consideration was the question of how much a curriculum could and should be built around PhBL as an underpinning pedagogic philosophy. In the scope of this project, it has not been possible to reach a conclusion here. Introducing PhBL moments into a curricula is appealing in terms of building faculty and learner confidence and seeing PhBL as an opportunity to diversify the curriculum diet. However, with limited episodes of PhBL there is the risk of isolating PhBL from the main body of curriculum. This disconnect from the student journey could result in undervaluing the approach and the underdevelopment of a learner’s metacognition.

In contrast visioning a commitment to full immersion of PhBL, potentially developing as an institutional signature pedagogy has a powerful appeal in a sector which demands transformational leaps to address significant awarding gaps and represent SDG4 to its full intention. It is clear the latter scenario would demand renegotiation, potentially of subject boundaries, course and modular shape alongside a robust structure to support student-directed learning. It must be reiterated though that the project’s interpretation of PhBL as a pedagogical approach which utilises existing instructional tools such as lectures, workshops and student-led learning does mean that PhBL adoption should disregard existing practices. The optimal commitment to the approach is worthy of more investigation. There is a need to balance familiarity and confidence with the method alongside the need to establish evidence of educational gain.

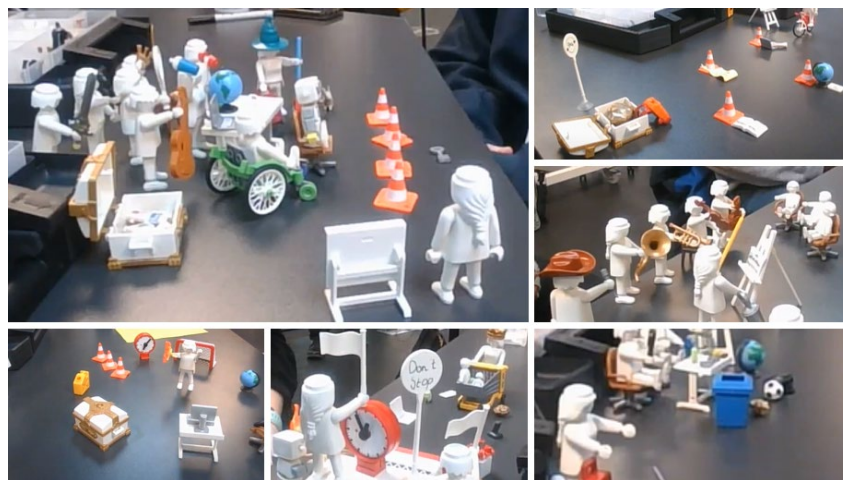
3.2 Generating a Toolkit

The artefacts generated by the students from the first five workshops informed our understanding of students’ appetite for learning through PhBL, but also helped shape the necessary considerations for planning PhBL learning opportunities. This knowledge formed the foundations to developing an effective educator toolkit.

From workshop 1 and an introduction to PHBL.....



...to a deeper understanding in workshop 4.



Using Playmobil, students were asked to build a representation of what PhBL is. They were then asked to describe their model. The common descriptions included:

- Sense of community – joint goals, group initiatives
- Research, World ticket, experience different things, Map – where to go next with a backpack and treasure at the end. The objects are all around - not linear because you might revisit things
- Clocks representing that it takes time to understand
- Globe as a sign of internationalism and inclusivity
- Exploring new issues and magnifying accompanying issue
- Unlocking other treasures that you didn't know existed
- A concert with a conductor and musicians – all having different opinions
- Someone with a trophy [accreditation]
- Focus on creativity and growth
- Different backgrounds and inputs from participants
- A bin to represent that the outcome could go either way
- Chest of knowledge – we all put our ideas into the box

We asked the students to think about how to get the best from PhBL, as a student and as a tutor or facilitator. These turned out to be almost the same with an emphasis on open-mindedness for both roles.

The ideal Student/Tutor/Facilitator/TA should be...



In Workshop 5 we looked at how you may assess PhBL. The students produced a manifesto for assessment:

A PHBL Manifesto for Assessment

Assessment should:

Display a knowledge and understanding of other perspectives

Include aspects of Professional development

Be real, make you feel like you have done some good

Be about coming up with solutions to challenges

Allow for group responses and solutions

Be a **MindMap** of Ideas

Be progressive

Be done by a mix of students

Include a choice of assessment – how do you showcase your learning in the best way

Include how you apply *your* knowledge

Acknowledge that there is not always a solution



In the final workshop we asked participants to send a postcard to a student new to PhBL. Here are 3 typical examples:



5.0 Reflections on working with students

In addition to creating the toolkit, lessons were learnt about student partnership work. Here are some key reflections from the project team:

- Payment of students was essential to create an accessible opportunity for engagement.
- We noticed that creating a safe and trusted environment allowed students to talk openly about their experiences of learning – some of this related to socio-economic experiences, neurodiversity, and inclusion.
- Exploring methods of facilitating PhBL e.g., through play and debating current, and sometimes controversial topics, had an impact on our use of these methods in other

situations. Engagement with a new pedagogy has a clear impact on personal practice growth.

- Staff and students in the sessions valued the unexpected learning moments; and we learnt to be comfortable with moments of silence and discomfort. Facilitative pedagogy requires trust and an ease with uncertainty.
- Establishing anchor points or milestones provided scaffolding for the students whilst allowing them agency.
- Some students simply enjoyed engagement in the project as an extra-curricular social activity
- Diminishing hierarchies and validating inexperience gave students the confidence to share their reflections in an open forum.

6.0 Impact

The impact of this project comes through the changes in us as individuals. We have worked with our students and have gained new insights. We have also contributed to the wider academic community by articulating our learning as a series of resources which make up the PhBL Toolkit. This is supplemented through further dissemination at events and through publication – for example, workshops held at Staffordshire University Learning and Teaching conference, the Staffordshire Annual Research conference and at Harper Adams as part of the Learning and Teaching Conference. Workshops held at Edge Hill Solstice conference and publications in [WONKHE](#) and [The Times Higher for Education](#).

Staffordshire university has built on this project to run a Participatory Action Research project. Volunteers were sought from the student group to share their PhBL expertise with their peers and generate suitable phenomena to take forward. This project was very successful with positive engagement clearly visible. Staffordshire will also be taking some of their findings to the ISSOTL 23 international conference in The Netherlands in Autumn.

This project occurred at the same time as Harper Adams University was undertaking a substantial curriculum review project; consequently the learning from this project fed into the development of a new curriculum framework which included the requirement for all future undergraduate courses to contain a module which adopted a pedagogic approach of PhBL or related pedagogies (authentic, enquiry driven methodologies). This was to ensure that students could undertake research led learning related to relevant issues and current challenges.

On a personal student level, our student cohorts seemed to grow in confidence. This was evidenced in many ways: by writing for [the QAA blog](#) on our project page; several of them took an expert role at a staff PhBL workshop; and every member of both cohorts contributed fully to the workshops.

7.0 Conclusion

Students developed their confidence, enhanced their critical thinking skills and started to take an assets-based approach to their own experience and skills.

PhBL is an inclusive approach as it appreciates the benefits of diversity and the strengths that differing viewpoints add to the final product. The toolkit has been designed to provide a starting point for educators interested in PhBL.

One of the SDG4 (Education) indicators is that “By 2030, we should ensure that all learners acquire the knowledge and skills needed to promote sustainable development.” As a HEI we should be encouraging our learners to not only explore their chosen discipline but to see how it fits into a local and global context. We think that adopting a Phenomenon-based learning (PhBL) approach may facilitate this.

PhBL References and Signposts

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Esref, A., & Cevat, E. (2021). The effect of phenomenon-based learning approach on students metacognitive awareness. *Educational Research and Reviews*, 16(5), 181–188. <https://doi.org/10.5897/err2021.4139>

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Santhalia, P. W., Yuliaty, L., & Wisodo, H. (2020). Building students' problem-solving skill in the concept of temperature and expansion through phenomenon-based experiential learning. *Journal of Physics: Conference Series*, 1422(1). <https://doi.org/10.1088/1742-6596/1422/1/012021>

Wolff, L-A. (2022). Phenomenon-based learning. In S. Idowu, R. Schmidpeter, N. Capaldi, L. Zu, M. Del Baldo, & R. Abreu (Eds.), *Encyclopedia of sustainable management* Springer. https://doi.org/10.1007/978-3-030-02006-4_1137-1 Classification: Restricted

Inspiring TED Talks about PhBL

Donna Fields “Phenomenon-based Learning [Phenomenon-Based Learning with Donna Fields PhD](#)

Elizabeth Marsland “Transforming Classrooms with Phenomenon-Based Learning”
https://www.ted.com/talks/liz_marsland_transforming_classrooms_with_phenomenon_based_learning

Appendix A – Information Sheet

Participant Information Statement:

“Stop the Clock” workshops

Project SDG (Sustainable Development Goal) 4.7 Developing Phenomenal Learning: A toolkit for implementing Phenomenon-Based Learning as part of a future-proofed SDG HE (Higher Education) curriculum

You are invited to participate in the research project identified above which is being conducted by a team of research evaluators in SCoLPP (Staffordshire Centre of Learning and Pedagogic Practice) at Staffordshire University and Harper Adams University, commissioned by the Quality Assurance Agency (QAA).

Why is the research being done?

The QAA has asked us to look at how we can work towards meeting a UN sustainable development goal (SDG 4) agreed in 2015.

The goal is that:

By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship, and appreciation of cultural diversity and of culture's contribution to sustainable development.

This project introduces Phenomenon Based Learning (PhBL) as an effective approach to help meet this goal. The Academic Strategy 2030 at Staffordshire is modelled on PhBL, and Harper Adams is currently undertaking an institutional curriculum review and developing pedagogic approaches for the future. We believe this project will benefit students by:

- Enabling students to develop skills as life-long/life-wide learners, whatever their starting points
- Promoting student aspirations through self-reflection, awareness and by creating opportunities for co-creation
- Enhancing social mobility, promoting confidence-building, and belonging
- Stretching boundaries of disciplinary studies and promoting inter/trans-disciplinary learning

What choice do you have?

Participation in this project is your choice. Whether or not you decide to participate, your decision will not disadvantage you or your learning. If you do decide to participate, you may decide to withdraw from the project at any point without giving a reason, however, you may forfeit all or a proportionate part of the payment.

What will you be asked to do?

You will be invited to participate in 8 Student workshops held on Wed afternoons between Oct 2022 and May 2023 in which you will be asked to join in activities designed to answer specific questions about how using a different approach to learning would work. These are called Stop the Clock (StC) workshops. Each workshop will last for 90 mins. Most of the StC workshops will be based at Staffordshire University at the Stoke-on-Trent campus but at least two will be jointly held at Harper Adams University in Shropshire. Transport will be provided by the university for all jointly held workshops. There may also be one online meeting via Teams and a link will be provided. The outputs of the activities and discussions (data) will remain confidential to the project.

What are the risks and benefits of participating?

This study offers you the opportunity to understand how UK (United Kingdom) HE works within a global context and reflect upon your own learning. Sharing your experience will help us to form a picture of what HE might look like using a different approach to learning.

- You will receive £256 in vouchers, which can be used in a range of shops/services. You will receive payment in 2 installments; one in December 2022 and another at the end of the workshops in May 2023) provided you attend all workshops. Refreshments will be provided on each occasion.
- You will also receive a digital transcript of your participation, outlining your contribution to the project and highlighting skills used in the workshops.
- Potential wider benefits of the study include a contribution to policy and practice and increased knowledge of enhancement activities across the HE Sector.
- There is the possibility that taking part in the study may restrict your ability to participate in university clubs or external events should they occur on the same day
- If you are unable to attend a workshop, you must contact us. If you are ill or have childcare difficulties for example, you will not be penalized by loss of voucher provided you can attend a minimum of 6 workshops.

How will the information collected be used?

Findings will be disseminated through the development of reports to QAA at milestone points in the project, along with associated learning objects created as part of any toolkit. The information will also inform any published outputs for dissemination across the sector.

Individual participants will not be identified in any reports, presentations or publications arising from the project unless you wish to be named and acknowledged as a contributor expressly on published outputs. The key findings will be made available to workshop participants for scrutiny before publication.

How will your privacy be protected?

Any information collected (including any recordings made within workshops or via MS Teams) that might identify participants will be stored securely and only accessed by the researchers, except as required by law. Written notes will be protected on a secure online server and stored on a password-protected computer, accessible only to the project teams. Written consent will be sought from all Student Participants members at inception.

Consent forms will be stored separately from data in an electronic file on a password protected computer accessible only to those involved in the facilitation of StC meetings as project team members. No paper copies will be retained by the University. Data will be stored for at least 10 years

following publication of results, after which it will be disposed of by deleting relevant files.

The University and SCoLPP Research Centre undertakes research as part of its function for the community under its legal status. Data protection allows us to use personal data for research with appropriate safeguards in place under the legal basis of public tasks that are in the public interest.

General Data Protection Act 2018 and UK GDPR (General Data Protection Regulations)

Your data will be processed in accordance with the General Data Protection Act 2018, incorporating the UK GDPR.

The data controller for this project will be Staffordshire University. The University will process your personal data for the purpose of the research outlined above. The legal basis for processing your personal data for research purposes under the UK GDPR is a 'task in the public interest.' You can provide your consent for the use of your personal data in this study by completing the consent form that has been provided to you.

You have the right to access information held about you. Your right of access can be exercised in accordance with the UK GDPR. You also have other rights including rights of correction, erasure, objection, and data portability. Questions, comments, and requests about your personal data can also be sent to the Staffordshire University Data Protection Officer. If you wish to lodge a complaint with the Information Commissioner's Office, please visit www.ico.org.uk.

What do you need to do to participate?

If there is anything you do not understand, or you have questions about the research please contact Stella Jones-Devitt at stella.jones-devitt@staffs.ac.uk

Please retain a copy of this information sheet for the duration of the research. You will be asked to confirm your consent to participate. If you have any issues or concerns with this project, please contact the lead for university ethics

Thank you for considering this invitation.

Kind regards,

Appendix B – Consent form

Participant Consent Form: “Stop the Clock” workshops

Please initial the boxes provided:

I have read the information contained in the Participant Information Statement and any questions asked have been answered to my satisfaction.

I agree to participate in the “Stop the Clock” (StC) workshops and give my consent freely.

I understand that the project will be conducted as described in the Participant Information Statement, a copy of which I have retained.

I understand I can withdraw from the project at any time and do not have to give any reason for withdrawing.

I understand that the StC workshop data outputs will inform the study and I agree that de-identified excerpts from the data may be used in the final publication.

I understand that my personal information will remain confidential to the researchers.

I understand that if I am unable to attend a workshop I must contact scolpp@staffs.ac.uk as I may be penalized by loss of vouchers.

I understand that participating in there is the possibility that taking part in the study may restrict my ability to participate in university clubs or external events should they occur on the same day

I consent for my anonymised data to be used in research reports, papers, and presentations. This remains anonymised unless I expressly give permission to be named generically as a contributor to published outputs.

Participant Signature _____ **Date** _____

Researcher Signature _____ **Date** _____

This project has been approved by Staffordshire/Harper Adams University’s Research Ethics Committee.

In case of complaint, please contact: The lead for university ethics: email address