

Gamification: Engaging and motivating 16-19 year olds on a pre-apprenticeship programme

The third blog drawn from research projects carried out by MA Education students at Wrexham Glyndŵr University (WGU) is by Julian Ayres, who completed his MA Education while working in Further Education. Julian explored ways in which gamification techniques could be applied to motivate disengaged learners. Julian adopted an action research methodology to improve the outcomes for learners on a Welsh Government funded Traineeship Programme. Julian is now working in Higher Education where he is continuing his research into the use of gamification amongst postgraduate students on an Initial Teacher Education programme. Edited by John Luker, programme leader for the MA Education at WGU.

This blog summarises an action research study that explored gamification techniques within the classroom to help improve attendance, achievement and aid progress into full-time apprenticeships for groups of 16-19-year-old learners in Wales. Research methods included the use of questionnaires, semi-structured interviews with industry professionals for online learning and data analysis. Student research participants were all classified as Not in Employment, Education or Training (NEETs).

Since 2011, the centre that I work for, has been delivering the Welsh Government funded Traineeship Programme, in collaboration with a Further Education (FE) provider in Wales. The success of each centre is defined by the percentage of students who have achieved one of the following statuses:

- Progression to learning at a higher level (Level 1 upwards);
- Entered employment (16 hours+);
- Moving from work experience placement to apprenticeship;
- Self-employment.

WG (2012).

Learners who leave the course early, are unable to complete their work placement, or move to another training course pre-level, and are classified as negative outcomes for the centre.

The centre is situated within an area which according to the Welsh Index of Multiple Deprivation (WIMD) is, high in educational deprivation and ranked overall as a highly deprived area of Wales (WG WIMD 2015).

Murray and Harlin (2006, p.278), in a study of students from areas of deprivation, identified that students succeed in education when they can be known as individuals and supported appropriately. The centre, as a small training provider in an area of deprivation, is capable of this support and plays a vital role in facilitating the continued development of traineeship courses, in collaboration with a larger FE establishment. Due to this, it is imperative that the centre ensures that the success criteria reflect the hard work that staff put in to gaining

positive outcomes for the students, hence my research into motivating traineeship learners to succeed whilst on programme.

The training centre's traineeship statistics since 2011/2012 have been in decline, with increasing numbers of students leaving the course early, failing to make the progression into an apprenticeship, or being asked to leave due to poor attendance, behaviour or attitude.

The study looked at addressing the current issues with attendance, motivation and work-based success of the students on the course. Though students were attending, they were not achieving the long-term goals. I wished to establish whether it was possible to create a system of gamification that would engage learners, motivate them to achieve, and help to develop the confidence that is needed for work-based success (Shaw and McAndrew, 2008, p.137).

Wales, according to the Intergenerational Foundation (IF), is struggling with youth unemployment, with 19.7 per cent of 18-24 year olds classified as NEETS in comparison to the rest of the United Kingdom which currently has an average of 17.3 per cent (Messenger 2015). The risk being, as Crawford *et al.* (2011, p.7-8) discuss, is that the more time that a young person spends being a NEET, the higher the risk of them having poor labour market outcomes. An initial spell of being a NEET between the ages of 16-19 further increasing the chances being unemployed up to five years later. There has been progress though, with the Welsh Government statistics (2015) showing that from the end of 2014, 10.9 per cent of 16-18 year olds (12,200) were classed as NEET, compared with 12,300 as of the end of 2013 (WG Statistics and Research, 2015).

Gamification is about the use of game elements, game mechanics and game thinking in non-game contexts (Enders 2013, p.7), with learner autonomy and learner-initiated choices, being the core dimension of game-based learning (Nolan and McBride, 2014, p.596). The focus of gamification is to engage learners on an emotional level and motivate them to achieve their goal, rather than a transactional engagement in which the learner achieves because it is a necessary requirement of their role, employment or training. The emotional engagement level of gamification is driven by the desire to do more than is required due to a personal desire to achieve (Burke 2014, p.16-17; Buckley and Doyle, 2014, p.1). The gamification tool is based on the award of badges for achievements in attendance in the classroom and workplace, completion of assessments, teamwork and completion of administration tasks. The badges available for learners follow a journey throughout the programme, with the achievement of each badge requiring greater student-led effort, aiding increasing learner autonomy and self-motivation to achieve (Deci and Ryan 2000, p.239)

For the research to be effective, I based my action research design on Bates (2008) responsive case study action research cycle. In this model, each new group of students is part of each cycle of action, observation, reflection and planning, with the data gathered from

each cycle helping to plan for the next group. The effectiveness of badges are evaluated after each group cycle, with learner's evaluations aiding the creation, or removal of badges in the system.

From the research, the participants identified several positive areas of the gamification system. Enders (2013, p.21) discusses the use of game levels, in which milestones are evident for learners to achieve, helping to provide a logical flow for the entire experience. They allow the learners to track their current progress, as well as take ownership of their learning by providing targets to be achieved throughout the duration of the course. In the questionnaires, students identified that they enjoyed this and it was easy for them follow and achieve. The system allowed for the class to be learner led, with the students in charge of directing the learning, looking at each badge as a target to achieve, picking the topic that they wanted to cover. Self-regulation in the classroom allows the learners to be given the autonomy to make independent decisions that as Deena *et al.* (2015, p.9), state, can aid their development through school and personal lives.

Deena *et al.* (2015, p.9) highlight the importance of self-regulation in the classroom for students, with them stating that when adults initiate and direct the student, it is direct instruction, whereas when the learner is given the opportunity to direct the initial adult set task, the learner is given the autonomy to make independent decisions that can aid their development through school.

The feedback from students and from the interview responses from practitioners indicated that gamification was significant as an approach to help learners break down their barriers to learning. Gamification techniques helped learners to identify the goals needed to complete the task, and to help them identify the skills they had used to complete these tasks.

Using the feedback from students and evidence gained during the research project, a model was created to aid with the future production and utilisation of gamification in the classroom (See figure 1).

Boghossian (2006, p.719) avers that constructivism, within education, allows students to discover their own truths, helping to drive them to achieve their final goal. This is ultimately what employers requested from their apprentices, leading to long-term successful outcomes.

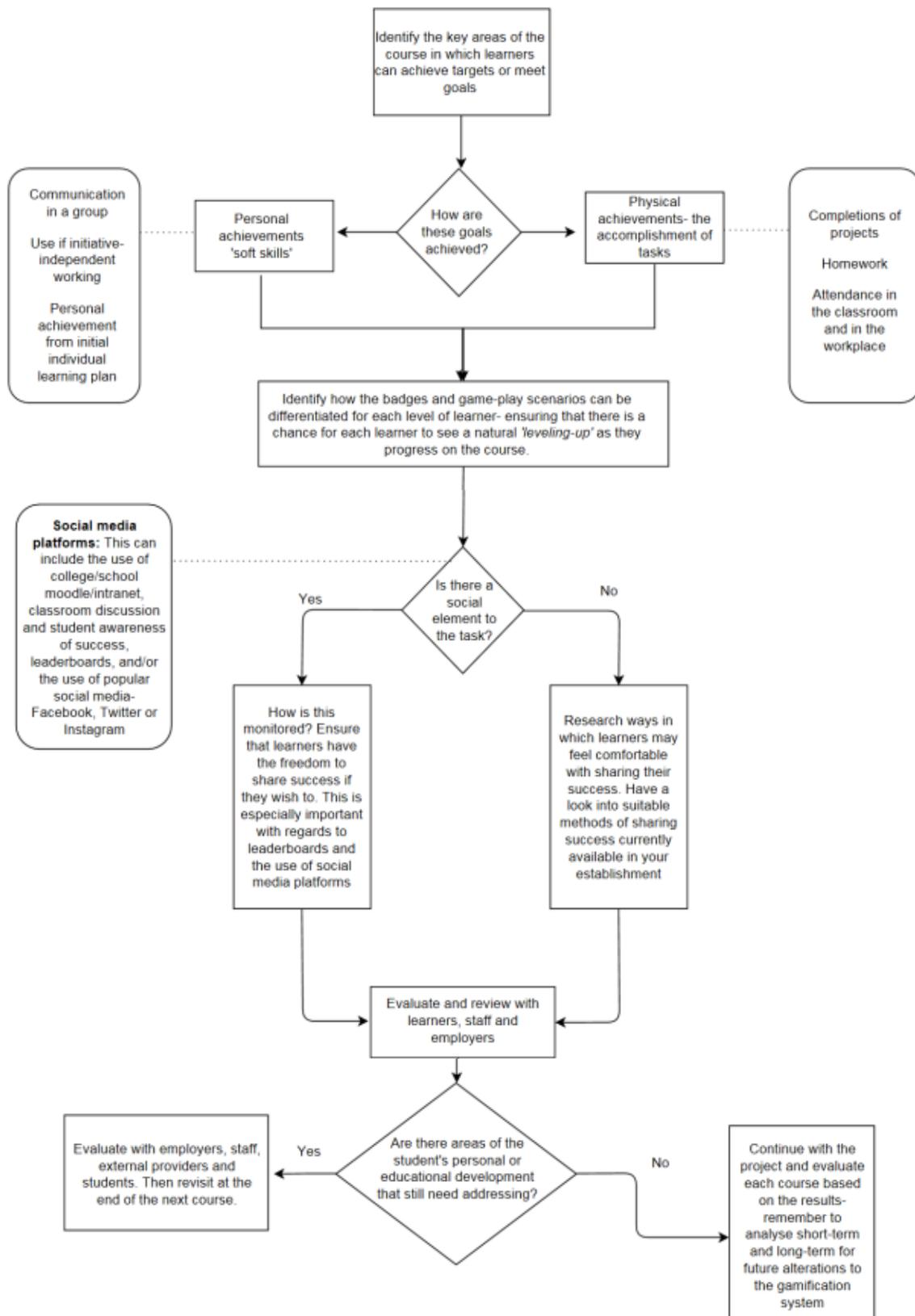


Figure one. Gamification creation process model for staff wishing to implement a badge system within their establishment.

In conclusion, the results of the study showed an increase in student attendance and an increase in positive progressions. In 2015/16 pre-gamification students had 20 per cent positive progression. In 2015/16 students using gamification techniques had a 62 per cent positive progression. This statistic, as well as demonstrating positive outcomes for the learners, also helped progress the training provider from an unsatisfactory ranking to adequate, just six per cent behind the national average.

Ownership of learning and the ability to self-manage their learning, rather than a didactic approach akin to their previous schooling, proved to be a significant motivating factor for many of the students who learned using gamification techniques.

The next cycle of the gamification research cycle aims to look at addressing some of the limitations of the earlier study. Having moved to a new role in Higher Education, my focus will be upon how gamification techniques can be used to facilitate the development of adult learners on a post-graduate Initial Teacher Education programme that has many vocational elements associated with the previous research.

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