

Gamification in a Year 10 Latin Classroom: Ineffective ‘Edutainment’ or a Valid Pedagogical Tool?

by Emily Evans

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The Context

The aim of this study is to assess the pedagogical soundness and validity of introducing an overarching *gamified* lesson structure to a Year 10 Latin class. *Gamification* can be defined simply as the process by which elements of game design (for example competition and point scoring) are incorporated into alternative contexts, including education (Yee, 2013, p. 335). This study will seek to measure the effect of a *gamified* course structure on two elements: students’ ability to fulfil lesson objectives, and their general attitude and motivation towards formative work. Very recently, examples of *gamified* learning environments have arisen in the Latin classroom (Gloyn, 2015 and Pike, 2015). Although this is a small pool of samples, the contemporary nature of the publications shines a light on the possibility that *gamification* is an emergent pedagogical tool. This has provided the impetus for the following study of the effectiveness of an overarching *gamified* structure on Year 10 students’ attainment and attitude towards the study of Latin. If successful, this topic has promising transfer potential, as it could be used as the basis for differentiation, a praise system, or even as a sister project, which provides a structure for tracking and rewarding formative work outside the classroom.

According to the scheme of work, the grammatical topic under consideration during this study is perfect and pluperfect passive tense verbs. This year, the department has decided to trial teaching Latin grammar in an alternative sequence, which is more closely aligned with the OCR GCSE exam specification Accidence and Syntax list. The class consists of seven students, who will all form part of my focus group. There is one student who moved to the school at the beginning of the academic year (Jane), a student with dyslexia and dyspraxia, who struggles particularly with writing (Kitty), a pupil-premium student (Charlotte), a maths scholar (Mary), and a student who is occasionally disruptive when she feels that work is inaccessible (Lydia). There are also two middle-attaining students (Lizzie and Georgiana). The real students’ names and work have been anonymised for the purposes of this study. Despite being a small class, there is a wide range in attainment and the students’ GCSE Minimum Estimated Grades range from A*-C. The class is part of a relatively newly established Classics department in a single-sex, state academy converter secondary school in central London. Assessment of students’ progress will be both formative and summative. Formative assessment will come in the form of starter and plenary activities, and feedback (oral and written) on students’ class and homework. There will also be a review of students’ points at the

beginning of each lesson, from which the class will be able to compare their level of participation against their peers’. Students sit a vocabulary and derivatives test during the first lesson of every week. This will be maintained during the sequence, and incorporated into the *gamified* course structure, at the teacher’s request.

Literature Review

This study seeks to assess the effectiveness of *gamification* as a tool to help a Year 10 Latin class learn, in this case, perfect and pluperfect passive verbs. It seeks also to explore the effect of an overarching *gamified* reward structure on individual students’ general attitude towards the study of Latin. This section is a synopsis of scholarship written on the subject of both child and adult play, and its impact on cognitive and emotional development, as well as motivation.

Gameplay and emotional development

The capacity of games to enhance a learning environment is noted by Koster (2004), who links the fun aspect of a game environment with the player’s desire for mastery of the

puzzle or pattern under consideration: 'It is the act of solving puzzles that makes games fun... with games, learning is the drug' (Koster, 2004, p. 40). The success of games is attributed to their capacity to inform the player in an engaging way: they are nuggets, which contain patterns for a player to consume (Koster, 2004, p. 36). It is the brain's ability to devour patterns which makes games and *gamification* a useful pedagogical tool, as it fosters a culture of intrinsic motivation, by providing a safe space in which students can learn to master newly-acquired information, without the stigma of failure. Because Koster's (2004) description of the fun element of games rests on the pursuit of given skills in 'concentrated chunks', then it is possible that these activities have a purpose and a place in the classroom (Koster, 2004, p. 36). One such example of the inclusion of play into a Latin learning environment is outlined by Pike (2015), who describes his *gamified* Latin course, and the effect it has had on his students' learning behaviour and motivation. The course is split into eight levels, or *moduli*, in which Latin language learning is studied alongside a central theme, for example Ancient Geography. To pass the *modulus*, students must complete an interactive project on a civilisation topic and demonstrate 'mastery' in quizzes on vocabulary and grammar. Much like the levels in game-based applications, such as *Candy Crush Saga*, students can take these multiple times until they achieve mastery of the *modulus* grammar topic (Pike, 2015, p. 5). This element, instead of encouraging complacency among students by alleviating the pressure of tests, has actually had the opposite effect. One member of the class states that 'retakes give us a chance to realise what's wrong, and they boost our self-esteem by letting us learn from mistakes and use what we learn to make something better' (quoted in Pike, 2015, p. 5). Increased resilience and ownership of one's learning process has been a key benefit of this *gamified* course, as students' fear of failure has been replaced with a healthier, more diagnostic attitude towards 'failure'. The quizzes in Pike's *gamified* Latin classroom offer a safe environment in which students can

practise and achieve mastery of a grammar topic, thus promoting resilience and a positive perception of effort. The incorporation of play into a learning environment and its effect on the emotional development of participants within it was also studied by Kolb and Kolb (2010), who observed an all-age American softball league team. The authors suggest that play in what they call a 'ludic learning space' has a positive educational impact, by promoting deep holistic learning, not just intellectual improvement (Kolb and Kolb, 2010, p. 26). The authors argue that a ludic learning space gives individuals the opportunity to be driven by intrinsic motivation, so that they can take charge of and define their own learning. The concept of a ludic learning space attempts to break down the work / play dichotomy, by suggesting that educational institutions' overuse of extrinsic motivation dilutes the possibility for self-regulated, mastery-oriented learning. For this to occur, a space must be made for participants to be guided by intrinsic interests and self-organisation (Kolb and Kolb, 2010). This can be achieved by the inclusion of games into a learning environment, thus endowing it with a 'ludic' quality. Kolb and Kolb (2010) note that a *gamified* learning environment promotes ownership of one's learning process, by offering an organised space in which intrinsically motivated goals can be achieved. The 'ludic learning space', therefore, engages students beyond in-class compliance. It promotes the development of emotional skills such as resilience and intrinsic motivation. In Gloyn's (2015) *gamified* undergraduate Latin class, she perceived a significant increase in students' submission of formative work. A badging system was operated, whereby students earned points for every piece of work submitted for marking. This *gamified* learning environment brought about a general increase in participation among students, as formative activities were rewarded through a clearly communicated, formalised system. By endowing tasks with a semi-summative quality, a positive perception of effort was cultivated in the class, with

students taking increased ownership of their learning.

The badging system operated by Gloyn (2015) gives a formalised structure for rewarding self-regulated participation, which is engaging to students. What Gloyn (2015) and Pike's (2015) *gamified* Latin courses show is that elements of gameplay can increase students' engagement not only with the subject, but also with the act of learning itself. A game environment is a safe space in which to gain mastery of a topic. It provides an opportunity for repetition of an activity, without a significant penalty for making mistakes. Because of this, games can have an effect on the emotional development of a player, as they take the sting out of failure. The concept of 'fun failure' is explored by McGonigal (2012), who believes that experiencing failure in an isolated game environment encourages the player to apply a more optimistic outlook to potential failure in the real world. Facing failure is an important emotional strength that can be learned from games, which can help to cultivate resilience. Seligman (1998), too, outlines the possibility that optimism can be learned and cultivated. He believes that there is a direct relationship between a person's optimistic disposition and perception of their own success (Seligman, 1998, pp. 164-6). This is cultivated in Pike's (2015) *gamified* Latin class, as students are required to respond to feedback from tests to optimise their performance in the next sitting. This process demonstrates the emotional benefits of *gamification* in the classroom. The opportunity for multiple attempts at learning offered by games provides the player with a safe space in which to increase their resilience and tackle the fear of failure.

Gamification and intrinsic motivation

It is the concept of 'mastery' which ties Pike (2015) and Gloyn's (2015) *gamified* Latin classrooms with Kolb and Kolb's (2010) 'ludic learning space'. It shines a light on a potential link between resilience and intrinsic motivation. The optimistic approach to learning and failure that can come about through game play is in constant dialogue with

the intrinsic motivation of the participant. We have seen above, in Gloy'n's (2015) badging system, that the application of a formalised system, which rewards student's submission of formative work, has encouraged higher participation, and a more positive perception of effort in the class. Dweck (2012) has written on the nature of motivation and human perception of effort. She describes a 'growth mindset' as an attitude, which perceives of learning as an opportunity to develop oneself. This is contrasted with a 'fixed mindset', which interprets education as a validating experience, through which one has to prove their intelligence. It could be argued that a *gamified* course, which allows multiple attempts at learning, fosters the development of Dweck's (2012) 'growth mindset', as students are encouraged to view their progression through the course as an opportunity to develop mastery rather than prove competence, in the same way that traditional assessment seeks to demonstrate.

The safe space of a *gamified* environment develops intrinsic motivation by offering students an atmosphere which rewards effort and multiple attempts at learning. This has the potential to engage students on a level beyond the compliance that traditional classrooms and assessments require, because it allows for greater student input and personal modification. Schlechty (2011) notes the importance of personalisation in creating an engaging learning environment. He states that compelling students to engage more actively in the process of learning will help to develop intrinsic motivation, creative approaches to problem-solving, and emotional resilience (Schlechty, 2011, p. 20). A *gamified* environment, such as Pike's (2015), described above, offers greater personalisation in the classroom, by allowing multiple attempts at learning. The *gamified* learning space is flexible, permitting students in the same system to undertake a variable amount of attempts to achieve personal mastery.

A *gamified* environment not only provides a safe space for students to cultivate and channel their intrinsic motivation, but it also encourages engagement by placing the onus on the

student to take responsibility for and secure their achievement of mastery. When comparing the effect of intrinsic and extrinsic motivators, Pink (2011) notes that self-motivated actions yield far greater productivity than an extrinsic reward. A *gamified* environment could encourage students to look past the compliance-based level of engagement required by the traditional classroom. The capacity for more individualised learning that the safe space of a *gamified* classroom can offer triggers a greater reliance on intrinsic motivation. Burke's (2014) study of *gamification* attributes the success of the process to the fact that participants are urged on by emotional engagement with the activities. This stands in opposition to the sort of transactional engagement that can arise in a traditional learning environment. This type of engagement does not see participants interacting creatively with the topic under consideration. Instead, their approach to the learning environment is dictated by extrinsic motivation, stemming from a desire to prove competence, as opposed to achieving mastery.

Because of its capacity to engage on a deeper level, *Gamification* could thus provide a more fulfilling, engaging learning space. Csikszentmihalyi (1975) considers the role of motivation and its effect on an individual's emotional wellbeing. He devised the concept of 'flow', which can be defined as a holistic sensation, which people feel when taking part in an enjoyable activity (Csikszentmihalyi, 1975, p. 36). Flow describes an optimal experience that is intrinsically rewarding. Csikszentmihalyi states that 'the more a person complies with extrinsically rewarding roles, the less he enjoys himself... the only way to break the circle is by making the roles themselves more enjoyable' (Csikszentmihalyi, 1975, p. 4). This study has important implications for learning environments, as it challenges the teacher to reflect on the extent to which the activities presented to students are meaningful and rewarding in and of themselves. A *gamified* environment seeks to promote the meaningfulness of activities by applying a clearly communicated reward structure for the attainment of mastery to the classroom, thus

fostering intrinsic motivation and a positive perception of effort among students.

The *gamified* learning environment and cognitive development

The *gamified* learning environment seeks to promote learning by providing a safe space for students to practise and achieve mastery of a given topic. The idea that play could contribute to an individual's intellectual development was put forward by Piaget (1951), who discovered that the act of playing helps to consolidate learning in children through the process of adaptation. This involves assimilation and accommodation: modifying the world to personal notions and changing actions to suit external demands, respectively (Piaget, 1951, pp. 161-66). Play is an outlet for assimilation, whereby a child appropriates new information into existing cognitive structures. Interestingly, play is considered to decrease as a child develops increasingly sophisticated cognitive abilities. Upon reaching adulthood, Piagetian thought states that play is no longer required by an individual.

Vygotsky (1933 / 1978), too, believes that play has a positive impact on the cognitive development of children (Vygotsky, 1933 / 1978, p. 554). Particular attention is given to the beneficial impact play can have on a child's capacity for abstract thinking. During play, an individual is pushed beyond his or her current understanding, making this activity the foundation of the 'zone of proximal development' (Vygotsky, 1933 / 1978, p. 552). The zone of proximal development can be defined as:

the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers. (Vygotsky, 1978, p. 86).

This can be applied to a *gamified* Latin course, as the safe space of a

gamified learning environment might facilitate the development of students' knowledge by providing not only exposure to scaffolding from peer and / or adult guidance, but also through an environment which encourages multiple attempts until mastery of a given topic is achieved. Because students have greater power over their lesson activity and ownership of their progress, a greater awareness of their own capabilities might result in students choosing to undertake certain tasks in class, because they feel that the presence of scaffolding, in the form of a teacher or peer, is required to help them complete it. A *gamified* learning environment could, therefore, allow for difficulty to be incorporated and calibrated carefully within lessons by both teacher and student, due to the flexibility of the course structure.

Gamification and formative assessment

As briefly discussed above, traditional assessment seeks to prove competence, rather than develop mastery by fostering a culture of improvement. Black and William (2006) believe that this is often reflected in the quality of formative feedback given to students. During the sequence, students will have a rolling homework task, whereby they will boost their scores by handing in self-selected work completed at home. Black and William (1998) observe that assigning grades to students' work significantly lessens engagement with qualitative feedback. This will be avoided, and students will receive suggestions for improvement, in order to promote intrinsic motivation, and engagement with marking. Because it is a *gamified* sequence, a scoreboard will be kept. It is included to assess the effect that natural human enjoyment of competition has on the class's engagement with the lesson topic and motivation (Yee, 2013, pp. 338-9). Students' progress will be informally assessed in their participation in plenary activities. Online quizzes will be incorporated into these parts of the lessons to increase the amount of near-instantaneous feedback students receive on their progress. This is in

response to McGonigal's observation that part of the appeal of game environments rests on the volume and frequency of feedback received (2012, p. 21). Students will also receive weekly vocabulary and derivations tests, which the class teacher has asked to be kept for the duration of this sequence.

In conclusion, the literature suggests a wide variety of potential benefits that *gamification* could have not only on students' performance in the classroom, but also on their general approach towards the act of learning itself. *Gamification* can provide a flexible environment, in which students are given greater responsibility for their learning, and a safe, engaging space in which to secure progress.

Teaching and learning: The lesson sequence

As stated above, *gamification* is the process by which elements of game play are incorporated into alternative contexts. The following sequence of lessons includes the elements of point scoring and the use of a leader board in a whole-class *gamified* programme called *Insignia*. The object was to gain points for satisfactory completion of in-class work. It was based on a badging system, as described by Pike (2015, p. 8). Each lesson followed a similar structure, which solely focused on a specific grammar point. Typically, after a starter activity, review of key terms, and an introduction to the topic under consideration, students were given an *Insignia* activity sheet, which contained a mixture of match-up, morphology and translation tasks. Students were allowed to complete the tasks in any order they felt comfortable with. This decision was made to try to promote *Insignia* as a 'safe-space' in which students could make mistakes and develop intrinsic motivation, akin to the 'ludic learning space' outlined above (Kolb and Kolb, 2010, p. 47). Each task was worth a certain amount of points, which students were awarded once they had completed the activity to a specified level of accuracy. A scoreboard was kept and displayed in class to measure the effect that the competition element had on students'

motivation (Yee, 2013, p. 343). There was a rolling homework task for the duration of the sequence, whereby students were asked to complete a self-selected *Insignia* task at home to practise the grammar point and boost their score. The sequence spanned three 55-minute lessons, bookended by two 30-minute slots, which will be referred to as lessons 1-5. After lesson five, students answered a survey on the *gamified* sequence, and participated in a short focus group to discuss their initial thoughts and opinions of *Insignia*.

Lesson One (5 January) — 30 minutes

This was the students' first Latin lesson after the Christmas holidays, and the first 25 minutes were led by the class teacher, who administered the usual weekly vocabulary and derivations test. The main aim of my portion of the lesson was to ensure that the components of a game were included in the *Insignia* format (McGonigal, 2011, p. 21). It was felt that a 30-minute sample of the *Insignia* format would be beneficial for students, as their initial response to it, and its effect on their ability to fulfil the lesson objective, would help to inform my planned sequence, allowing me a brief opportunity to evaluate and adapt activities, if required, to make sure that students' learning and motivation were enhanced.

The first part of the lesson included a brief explanation of *Insignia*. All seven students were generally curious about it, which was encouraging. Charlotte said 'Miss, what do I need to do? I want to win.' This was particularly interesting, as the instinctive human enjoyment of games may have governed Charlotte's initial reaction to the lesson format (Koster, 2004, p. 36). Students particularly engaged with the line drawings of ancient women, which I had assigned to each member of the class for the scoreboard. Lydia was particularly animated when she saw her character, and the girls briefly discussed the clothes and appearance of their assigned line drawings. Students enjoyed the element of personalisation, which was encouraging, as it may have helped

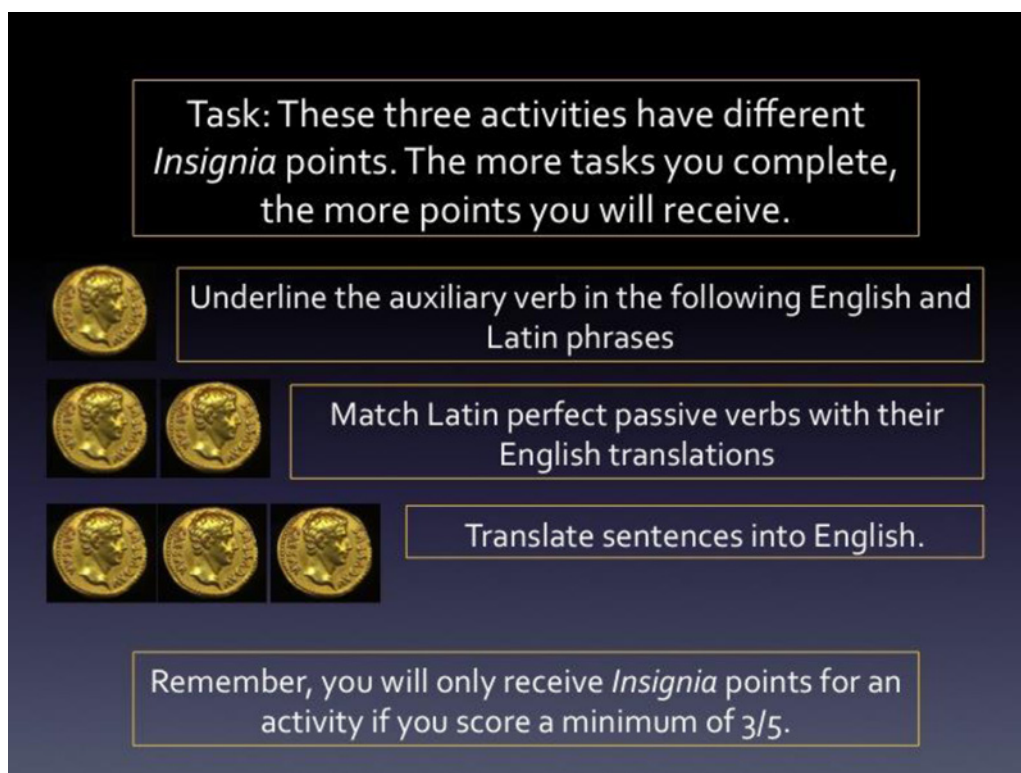


Figure 1.

to trigger ‘voluntary participation’- one of the four necessary components that form part of MacGonigal’s definition of a game (2011, p. 21). The class’s warm reception to the *gamified* lesson structure was followed by an explanation of the rules of *Insignia*. I emphasised that points would be earned through students’ ability to complete activities not quickly, but to a specified level of accuracy (see Figure 1 for example).

This was a necessary element to stress, as I did not want students to perceive of the activity as vacuous ‘fun’, with no purpose or direction. It was important to communicate to the class that the fun element of *Insignia* was closely anchored to their engagement with the topic under consideration. I wanted the class to see the *gamified* lesson structure as the tool which would enhance their ability to fulfil lesson objectives, rather than a sideline scheme which uses ‘fun’ to entice them into the topic, and nothing more. I was directed towards this approach by Koster (2004), who linked the fun of games with learning. Using Koster’s connection of mastery with the fun element of games as a model for presenting *Insignia* to students was useful. From my observation, students

did not rush to complete activities when they received the task sheet, which could be seen as evidence of acknowledgement that reward would come from accuracy, as opposed to speed.

This lesson had two learning objectives: ‘to understand what an auxiliary verb is, and what it does in a sentence’ and ‘to recognise the perfect passive tense in Latin’. The starter activity was incorporated into the *gamified* lesson structure, and each student answered it with enough accuracy to earn their first *Insignia* point. The class was then presented with their *Insignia* challenge sheet (Figure 2).

They were encouraged to complete the activity in any order they felt comfortable with. Because we were only taking a 30-minute slot of a lesson, students were given ten minutes to work through the tasks. I advised the class that if they felt least confident with the concept of an auxiliary verb, then they ought to start with *Insignia* I, or begin with *Insignia* II, if they felt the need to develop their understanding of Latin perfect passive verbs. Kitty, who occasionally finds reading and writing difficult due to her dyslexia and dyspraxia, started with the first activity, which involved

underlining auxiliary verbs in English phrases, while others started with the second. From the perspective of differentiation, the *gamified* course structure allowed for a more inclusive environment in this particular lesson, as the flexible sequence, which was offered to the whole class, meant that there was generally a diverse range of activity occurring. The greater emphasis on personalisation dampened the potentially negative impact of singling out an individual student. The fact that students were following personally selected routes through the activity sheet was encouraging, as they were taking increased responsibility for and ownership of their classwork, rather than simply engaging in ‘passively compliant’ learning behaviour (Schlechty, 2011, p. 15).

As a plenary task, students completed a *Memrise* quiz on perfect passive verbs. I incorporated this element into the lesson to increase the amount of feedback students receive. This was motivated by McGonigal’s (2011) observation that the draw of games, particularly digital ones, lies in the sophisticated, near-instantaneous, feedback systems that they offer. The benefit of the instant feedback offered

Insignia tasks

Option I: (I *Insignia* point) Please underline the auxiliary verb in the following English and Latin phrases.

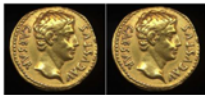
portatus est	liberatae sunt
I was mocked	It was said
narratus est	He was chased
They were praised	accepta es
tractae sumus	missi sumus



How did you do? 6 or more out of 10 earns an insignia point!

Option II: (II *Insignia* points) Please match the following perfect passive verbs with the correct English translations.

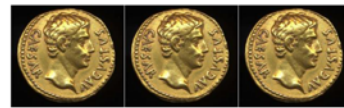
portatus sum	I was carried
monita est	They were set free
auditum est	We were received
acceptae sumus	It was heard
liberati sunt	She was warned



Get your answers marked to check if you've earned 2 *Insignia* points.

Option III: (III *Insignia* points) Please translate the following Latin sentences into English.

1. navis a Romanis inventa est.
.....
2. pecunia Verri a populo data est.
.....
3. servi fortissimi a domino liberati sunt.
.....
4. clamor a puella auditus est, sed nihil cognovimus.
.....
5. cena optima nobis a matre parata est.
.....



If you translate 3 or more sentences correctly, you've earned 3 *Insignia* points.

How did you do?

Total score:

Figure 2.

by a *Memrise* quiz, which takes place in a 'safe' *gamified* setting, is that it flags any misconceptions instantly, without a penalty. Online sorting and quiz activities were incorporated into the lesson sequence in order not only to assess the extent of students' fulfilment of lesson objectives, but also to provide the class with a safe environment in which to practise and refine their knowledge of perfect passive verbs. This was done to incorporate Pike's (2015) observation that the safe space offered by a *gamified* language class 'mirrors the way languages are learned in natural environments, namely, through the trial and error of repeated practice' (Pike, 2015, p. 2). In a class which consists of students who lack confidence, it was important to communicate the necessity of resilience in Latin learning among this group of students, and cultivate this characteristic. The online quiz worked well, as it allowed for multiple attempts of the same activity, which promoted mastery, and provided a space for this level of understanding to be achieved. Students answered the

quiz with accuracy, which could be seen as evidence for students' increased ability to recognise the perfect passive tense.

Lesson two (7 January) — 55 minutes

The learning objectives for this lesson were 'to be able to recognise and accurately translate the perfect passive tense at sentence level' and 'to revise the concept of agreement'. My focus during this lesson was on providing an opportunity for the cultivation of resilience in a *gamified* Latin classroom. The lesson began with a review of the *Insignia* scoreboard, in an attempt to incorporate human enjoyment of competition into the *gamified* lesson format (Burke, 2014, p. 4). At this point, there was very little movement in the scoreboard, with five students on four points and two with three points. Another reason why a scoreboard review was incorporated into the lesson was to emulate the success of the

feedback system of the *Memrise* quiz as far as possible, by integrating quantitative feedback into the *Insignia* programme (McGonigal, 2011).

The next element of the lesson was the independent *Insignia* collection. I was keen to see how many students had completed this self-selected task, to gauge an impression of their initial attitude towards formative work. Five out of seven students handed in work for me to mark. I was reasonably happy with this, as it was an unstructured independent task, and there was only a day between this lesson and the previous one in the sequence. I praised these students for their diligent attitude and motivation. The aim of this lesson was to develop students' understanding of the concept of agreement. The class was given a starter activity, which required them to match a given PPP with its accompanying noun. The purpose of this was to encourage the class to think in general terms about the concept of agreement between participles and nouns, in preparation for the *Insignia* activities. The five minutes allotted to this activity were not enough for the class, as it became

apparent that they were not confident with their noun endings. High-attaining students were also struggling with this task. Lydia grew restless and began complaining that she didn't know anything and couldn't do it. After directing students to the declension tables in their folders, and briefly reviewing the key terms *gender*, *case* and *number*, students were able to complete the activity. All students managed to earn an *Insignia* point, and I praised them for showing resilience during a difficult task. I adopted this approach in an attempt to foster a positive perception of effort in the class, and promote a growth mindset among the students (Dweck, 2012).

I devised more rigorous *Insignia* tasks in this lesson, to gauge an impression of the class's current attitude towards difficulty in their learning of Latin (see Figures 3 and 4). This was done in response to Dweck's (2012) observation that those with a growth mindset do not strive for immediate perfection in learning, but rather seek progress over time. A growth mindset is an important characteristic to develop in the Latin classroom, because as a language subject, the role of persistent practice in ensuring understanding requires the development of resilience and intrinsic motivation. By rewarding a

diligent attitude towards formative work, the *gamified* classroom attempts to create a positive perception of effort (Gloyn, 2015). Despite the increase in difficulty, on the whole, students were showing positive behaviour and embraced the challenge of the main *Insignia* activity sheet. After completing the morphology task and earning an *Insignia* point, Lizzie asked 'So Miss, will the noun and PPP ending always look the same, except for third declension ones?' This was encouraging, as she showed engagement by attempting to make a universal rule on the concept of agreement. This might align with Koster's (2004) observation that a game environment provides an individual with a safe, isolated space in which to identify and wrestle with a pattern.

However, despite increased engagement with the activity, there was still some negativity among the group. When I was marking Lydia's *Insignia I* morphology activity, she said 'I don't like this *Insignia*'. Despite this negativity, she still received a point for her overall accuracy. The fact that there was a 'tangible' reward for her work meant that there was a formal system for recognising the effort she had invested into the text (Yee, 2013, p. 342). Because of this, she responded to my verbal

feedback on her completed work more positively than in previous lessons when she handed in an activity that she found challenging for comment. The structured reward system of a *gamified* classroom might help to change students' perception of effort, and foster resilience (Dweck 2012). Because she had received a formal reward for her work, Lydia had a more positive demeanour during the sentence translation task. I attempted to cater for the mid- to high-attaining members of the class, by including an opportunity to translate English sentences into the *Insignia* activity, to recalibrate the difficulty of the *gamified* format. This was included to align with McGonigal's (2012) observation that quantitative feedback, in the form of an increasing score, should be accompanied by qualitative feedback, whereby players also experience an increase in difficulty. Vygotsky's (1933 / 1978) description of the zone of proximal development also informed my incorporation of increased difficulty in the *Insignia* activity. I attempted to promote progress by increasing the level of challenge, but still keeping it within the reach of the skills students had already mastered. The safe environment of the *gamified* lesson complemented this, as the presence of a

Task: These three activities have different *Insignia* points. The more tasks you complete, the more points you will receive.

- 1 point: Filling in the correct part of the auxiliary verb and PPP ending in Latin sentences, using English translations.
- 2 points: Translating Latin sentences and changing the number of perfect passive verbs.
- 3 points: Translating English sentences into Latin.

Remember, you will only receive *Insignia* points for an activity if you score a minimum of 3/5!

Figure 3. |

Insignia tasks

Option I: (I Insignia point) Fill in the correct part of the auxiliary verb and PPP ending in these Latin sentences, to match them with the English translation.

1. ancillae a domino audit.....
The slave girls were heard by the master.
2. donum a populo dat.....
A gift was given by the people.
3. equi a homine servat.....
The horses were looked after by the man.
4. vinum a Melissa portat.....
The wine was carried by Melissa.
5. Clodia et Marcus ab ancilla vis.....
Clodia and Marcus were seen by the slave girl.

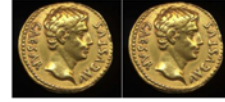


How did you do? 6 or more out of 10 earns an insignia point!

Option II: (II Insignia points) Please translate these Latin sentences and change the number of the perfect passive verbs.

1. homines a Romanis defensi sunt.
.....
sg. of defensi sunt:.....
2. poculum a Metella factum est.
.....
pl. of factum est:.....
3. thesaurus a meis amicis datus est.
.....
pl. of datus est:.....

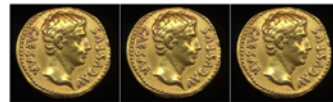
4. villa a Marco aedificata est.
.....
pl. of aedificata est:.....
5. iuvenes a patribus missi sunt.
.....
sg. of missi sunt:.....



Get your answers marked to check if you've earned 2 Insignia points

Option III: (III Insignia points) Please translate the following English sentences into Latin.

1. The slave was killed by a rock. (interficio, interfectus)
.....
2. The book was read by Clodia. (lego, lectus)
.....
3. The man was defended by the judge. (defendo, defensus)
.....
4. The dinner was cooked by Marcus. (coquo, coctus)
.....



If you translate 3 or more sentences correctly, you've earned 3 Insignia points

How did you do?

Total score:

Figure 4. |

formal system which recognises students' effort meant that students were willing to show resilience. Jane and Mary reached this part of the *Insignia* challenge during the lesson, which was encouraging. They found it challenging and approached the task with a positive outlook, by asking sensible questions about the gender of nouns, and word order. Their behaviour showed intrinsic motivation, and potentially pointed towards a desire to gain mastery. From the perspective of differentiation, the inclusion of this activity meant that students of all attainment levels were being encouraged to display and develop resilience in the *gamified* learning space. Unfortunately, because more time had to be devoted to the starter activity, we did not reach the plenary. In a way this was a shame, as students might have benefitted from a brief change of pace, as a reward for their engagement during the *Insignia* activity. While I could not say with complete confidence that students fulfilled the lesson objective of revising the concept of agreement, their

response to the learning check, and answers to the Latin sentence translation activity showed a sound understanding of how to recognise and translate perfect passive verbs at sentence level.

Lesson three (12 January) — 55 minutes

The students' third *gamified* Latin lesson followed a break in the sequence, due to a conflict with my teaching timetable. On 8 January the class had a lesson with a colleague in the Classics department. This slot is traditionally dedicated to developing students' translation skills. Students apparently asked during that lesson whether they would receive any *Insignia* points for their work, which was encouraging, as it showed engagement with the format. The learning objective for lesson three was 'to recognise and practise translating the pluperfect passive tense'. The

lesson began with students' weekly vocabulary and derivatives test. This was incorporated into the *gamified* lesson structure, and students could gain one point for achieving over 14 correct answers in the vocabulary element of the test. There was an extra point available for the student who thought of the most interesting derivative. This was included to add a further element of challenge and unpredictability to the *Insignia* format (Yee, 2013, p. 338). During feedback, there were a number of interesting derivatives. The extra *Insignia* point was awarded to Georgiana for deriving 'aquamarine' from *mare*. After this, we reviewed the scores, to continue the provision of regular quantitative feedback to students, as discussed above. After adding the scores from students' independent *Insignia* work, there was greater movement in the scoreboard: Charlotte, a pupil-premium student, was in the lead with 15 points, closely followed by Jane on 14 points. Lydia

was disappointed to be at the bottom of the leader board. Because she was showing some negativity during the previous lesson, I asked a colleague to observe and record Lydia's activity so that I could gain a clearer picture of the extent of her engagement with the *gamified* course structure. She responded to the scoreboard review, by saying 'Not really understanding that. No, don't agree with that'. I and, interestingly, other members of the class pointed out to her that she had not submitted any independent *Insignia* work to be marked. Everyone, except for Jane, who had finished last lesson's *Insignia* task, handed in independent work. This was extremely encouraging, as it showed that generally students were taking an increased responsibility for their own learning. It also showed that the format ought to be adjusted to push high-attaining students, such as Isabel, by making sure that they also have formative tasks to carry out at home (Koster, 2004, p. 127). Mary, Charlotte and Lizzie all attempted the English to Latin sentences independently. This showed increased resilience, and could be seen as evidence for the development of a growth mindset, particularly in the case of Charlotte

and Lizzie, who often lack confidence (Dweck, 2012). The fact that they attempted a difficult task, which was self-selected, showed motivation to improve and a willingness to take risks, which could be seen as a desire to gain mastery over the grammar topic (Pink, 2011).

Because the previous set of *Insignia* activities was much more rigorous than the first lesson's, I wanted to concentrate more on differentiation for the lower-attaining students, specifically Kitty, who finds writing difficult, because of her dyspraxia. Unfortunately, she was absent from this lesson. Nevertheless, I substituted the morphology task for a match-up activity, so that she could earn one *Insignia* point with ease, and boost her confidence. It was hoped that the encouragement from an initial success would point towards a realistic potential for mastery of the topic (Yee, 2010, p. 344). In the past she has been self-conscious about her attainment, but it was hoped that the personalised nature of a *gamified* lesson structure would help to develop Kitty's confidence by increasing her motivation and resilience (Dweck, 2012). When designing this lesson's *Insignia* tasks, I attempted to apply

Vygotsky's (1933 / 1978) theory of scaffolding, by placing the tasks within her zone of proximal development, as far as possible (see Figures 5 and 6).

The safe space which a game provides to achieve mastery at one's own pace, could, in theory, have worked alongside Vygotsky's (1933 / 1979) zone of proximal development to help Kitty to achieve lesson objectives with greater success. It was a shame that she was absent from this lesson. Unfortunately, we did not have enough time for the plenary *Memrise* quiz activity. I had planned to include this into the lesson because it proved to be an engaging and useful tool in the first lesson of the sequence, by providing a safe space in which students could make numerous attempts at an activity, until mastery is achieved (Koster, 2004). Despite this, as all students achieved at least three *Insignia* points from the main activity, with the majority at least half way through the translation task, I can say that students were developing the ability to confidently recognise and translate the pluperfect passive tense. While students were packing away, Georgiana asked 'Can we keep *Insignia* going for longer? It's really motivating.'

Task: These three activities have different *Insignia* points. The more tasks you complete, the more points you will receive.

- Matching the pluperfect passive verb to its English equivalent.
- Changing the number of perfect passive verbs.
- Translating Latin sentences, containing pluperfect passive verbs.

Remember, you will only receive *Insignia* points for an activity if you score a minimum of 3/5!

Figure 5. |

Insignia tasks

Option I: (I Insignia point) Please match the pluperfect passive verb to its English equivalent

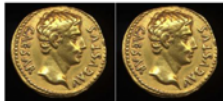
portatus erat	You had been freed
amatae eramus	He had been carried
visus eram	They had been dragged
liberata eras	We had been loved
tractae erant	I had been seen



How did you do? 3 or more out of 5 earns an *Insignia* point!

Option II: (II Insignia points) Please change the number of these perfect passive verbs.

portatus eras	pl. =
monita erat	pl. =
auditus eram	pl. =
acceptae erant	sg. =
liberati eramus	sg. =



Get your answers marked to check if you've earned scored 3 or more out of 5.

Figure 6. |

Lesson four — 55 minutes (14 January)

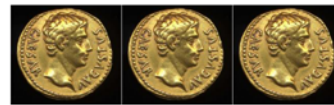
The learning objective for this lesson was 'to practise translating the pluperfect passive tense and develop the ability to distinguish it from the perfect passive.' I re-evaluated my approach to qualitative feedback during this lesson, in response to the fact that Jane had not had any independent work to complete from the last two lessons in the sequence. Instead of making the activities generally more rigorous, as in the second lesson, I chose the strategy of including another *Insignia* task worth four points, which involved translating English sentences into Latin (see Figures 7 and 8). I felt that this was the best way to maintain the accessibility of the main activity, whilst simultaneously increasing the difficulty, to cater more effectively to all attainment levels by offering greater flexibility, and more opportunities for personalisation.

Time was devoted in this lesson to returning students' independent work. The class was given a brief amount of time to look over any comments made on their work. I approached marking by aligning with Black and William's (2006) observation that feedback should be anchored to 'the particular qualities [a student's] work, with advice on what he or she can do to improve' (Black and William, 2006, p. 10). I tried to include suggestions for improvement alongside praise to make sure that students were rewarded for showing resilience and taking a risk in their learning, but also given practical, tailored advice on how to improve. I then went over some general points as a class. Students were told that if they responded to the suggestions, then I would re-mark their work, and they could still earn points. This was done to further promote the *gamified* classroom as a safe, trial-and-error-friendly space, as well as encourage student engagement with formative feedback

(Black and William, 2006). I used stickers to make the *gamified* points system more tangible by physically badging students' work, and as a replacement for grades on students' work. This was done as a response to Black and William's observation that assigning grades to students' work significantly lessens engagement with qualitative feedback (Black and William, 1998). Black and William's (1998) findings on formative assessment had to be held in a delicate equilibrium with McGonigal's (2011) observation that part of the appeal of a gamified environment lies in the frequency of quantitative feedback. In an attempt to do this, I tried to restrict quantitative feedback on students' *Insignia* work to the scoreboard review, which contained no breakdown of students' numerical results in specific activities. By only seeing an accumulative score of their overall numerical progress through the sequence, coupled with formative

Option III: (III Insignia points) Please translate the following Latin sentences into English.

1. nihil a Clodia dictum erat.
.....
2. laeti servi a domino liberati erant.
.....
3. novum consilium a fure factum erat.
.....
4. epistula mihi a mea sorore missa erat.
.....
5. fortis miles in monte a gladio occisus erat.
.....
6. libri in foro a Clodio venditi erant.
.....



If you translate 3 or more sentences correctly, you've earned 3 *Insignia* points

How did you do?

Total score:

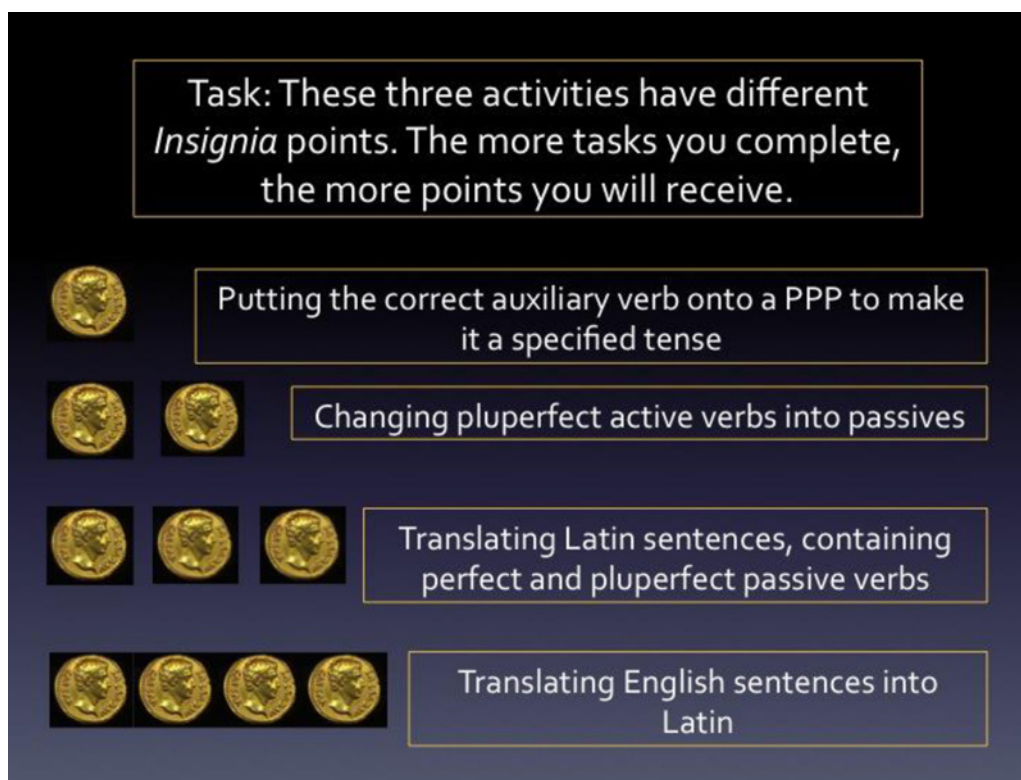


Figure 7. |

feedback on their individual *Insignia* tasks, it was hoped that a balance would be struck between quantitative and qualitative feedback in the *gamified* environment. There was evidence that students were engaging with formative feedback in this portion of the lesson, as Lizzie asked, after reading the comments on one of her Latin prose composition tasks ‘Miss, I want two points, but where can I get the Latin words *at home?*...How do I find the gender?’. I explained to her, and the rest of the students that the vocabulary was either in the other *Insignia* tasks on the sheet, or in their OCR GCSE vocabulary lists. During the independent *Insignia* collection, five out of seven students submitted completed work to be marked. Lydia’s submission of work was encouraging, as it could be seen as evidence for an increased engagement with the *Insignia* format, and increased motivation (Pike, 2015). Mary and Lizzie showed a marked improvement in the quality of their independent work, particularly in the English sentence translation task. Not only does their repeated attempt at this type of task potentially display resilience and a desire for mastery, but it also shows positive progress towards this self-set goal (Pink, 2011).

Interestingly, the aim of completing the English to Latin sentences activity dictated Charlotte’s approach to the *Insignia* task during this lesson. After completing the first two tasks, and the first Latin sentence translation question, she then said ‘I’m actually going to start the English sentences now, because you’re here to help, miss. I can do the others [Latin sentence translations] at home’. This was interesting, as it could be seen as evidence not only of intrinsic motivation to achieve a self-set goal, but also an increased knowledge of the steps she needed to take in order to fulfil it (Pink, 2011). This could be interpreted as a move beyond what Schlechty describes as ‘passive compliance’ with the lesson’s activities (Schlechty, 2011, p. 15). Through the personalisation offered by a *gamified* lesson environment, Charlotte demonstrated knowledge of her own capabilities, and how to progress (Vygotsky, 1933 / 1978).

Overall, the learning objective was met in this lesson. From my observation of students’ *Insignia* work, and their ability to complete the sorting game with complete accuracy, they could distinguish confidently between perfect and pluperfect tenses

in Latin, and were making significant progress towards accurate translation of these tenses at sentence level. All students were appropriately challenged, due to the flexibility granted by a fourth *Insignia* activity, and consequently each individual left with independent *Insignia* work to complete at home.

Lesson five — 30 minutes (19 January)

During this lesson, students sat their weekly vocabulary and derivatives test, which was incorporated into the *Insignia* gamified structure, as described above. Lydia was absent from today’s lesson, as was Kitty, once again. This was disappointing, as she also missed the vocabulary test given at the beginning of lesson three. Overall, students achieved high marks, with Mary especially gaining an increase in marks in the derivatives section, which may have been due to the prospect of an extra point for the most interesting derivative, which she achieved in today’s lesson. All students except for those who were absent gave work in to be marked. This was extremely encouraging, as not only could it possibly be seen as

Insignia tasks

Option I: (I Insignia point) Please put the correct auxiliary verb onto the PPP to make it match the tense of the English translation

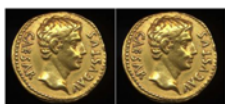
portatus	You were carried
bibitum	It had been drunk
capta	She was taken
liberatae	They had been freed
clamatum	It was shouted



How did you do? 3 or more out of 5 earns an *Insignia* point!

Option II: (II *Insignia* points) Please change these pluperfect active verbs into passives. Use a dictionary to check that you have the correct PPP. **Make sure you put the correct ending on the PPP!**

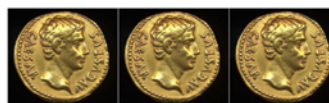
amaveram (m.)
monuerant (f.)
celaverat (n.)
acceperamus (m.)
dixerat (n.)



Get your answers marked to check if you've scored 3 or more out of 5.

Option III: (III *Insignia* points) Please translate the following Latin sentences into English.

1. regia a militibus defensa est.
.....
2. magna urbs a rege recta erat.
.....
3. silva igne consumpta est.
.....
4. epistulae a domina scriptae erant.
.....
5. duces a gladiis occisi sunt.
.....
6. cena in triclinio parata erat .
.....



If you translate 3 or more sentences correctly, you've earned 3 *Insignia* points

Option IV: (IV *Insignia* points) Please translate the following underlined parts of these English sentences into Latin.

1. The soldier was killed by a sword in the forum. (occido, occisus)
.....
2. Dinner had been cooked by the slave. (coquo, coctus)
.....
3. The city was ruled by the king. (rego, rectus)
.....



Get your sentences marked to see if you've earned 4 *Insignia* points.

How did you do?

Total score:

Figure 8. |

evidence for sustained engagement and increased intrinsic motivation, it also showed that the *Insignia* tasks provided an acceptable level of challenge for students of a range of attainment levels. It is worth noting also that Lydia gave me her independent *Insignia* work for lesson five during our next lesson, which fell outside the sequence. The *Insignia* mark sheet shows that all students gained points on the independent work completed between lessons four and five, which could be seen as evidence for improvement in the quality of Latin work done at home. Some reasons for this could include engaging with and responding to the formative feedback

given during lesson four, or an increase in intrinsic motivation, springing from a desire to gain mastery.

Administering the test and reviewing the answers as a class took the final 30 minutes of the sequence. For this reason, there were no specific learning objectives. During the last 25 minutes of the lesson, students were given an opportunity to complete a survey on the *Insignia* lesson structure. Students then participated in a small informal group discussion of their thoughts and opinions of *Insignia*. As she was initially less engaged than others during the first few lessons in the sequence, I was keen to hear Lydia's

thoughts. By the same token, Kitty's opinions would have been extremely valuable, as I wanted to get a clearer idea of the accessibility of the resources for her.

Conclusion

Students' generally positive feedback to the *Insignia* format is encouraging. Their increased motivation and classroom engagement could be seen as evidence for the perception of *gamification* as a valid pedagogical tool in the Latin classroom. The only

disappointing aspect to this experience is that the continued absence of Kitty makes my initial conclusions about the positive effect of a *gamified* Latin course on students of all attainment levels more tentative.

The reward structure provided a motivating incentive for students to work more efficiently during lessons. However, some felt that they needed more practical help with their work at home. This was despite an increase in the quality of the work they submitted over the course of the sequence, especially in the English to Latin activity. This may have been due to a lack of engagement with formative feedback. Although I tried to ensure that my comments were anchored to student improvement, I did not allow for an in-class opportunity for all students to answer formally the suggestions made on their work. If I were to run a *gamified* Latin course again, I would incorporate student engagement with marking more formally into the system. This could be done by adding an extra point to the total value of an activity that students hand in for re-marking after responding to comments. This could possibly ensure that the class was being offered the opportunity for self-evaluating in a *gamified* learning environment, as well as personalisation of the work itself. The increase in the amount of independent *Insignia* work submitted by students could be seen as an indication of increased diligence and intrinsically motivated learning behaviour. Students said that they enjoyed the fact that they could choose their own sequence through the activities, as it made them feel responsible for their own learning. Some students submitted work for me to mark at the beginning of each lesson, which was very encouraging. This very regular insight into their attainment helped me to build a clear picture of their strengths and

weaknesses, and adapt my planning and teaching to suit their needs more quickly than in a *non-gamified* classroom. However, the drawback to this increase in marking in a *gamified* course is that the increased administrative activity requires an organised point-recording system. In class I used a tally sheet, which I then input onto a spread sheet as soon after the lesson as possible. In a large class, this would not be feasible, and a more sophisticated system would need to be put in place.

From students' answers in the survey, and my observations over the lesson sequence, it is possible to say that, overall, students found a *gamified* lesson format motivating, because there was a clearly communicated, formal reward system incorporated into every lesson. According to a few students' surveys, this increased motivation helped them to be more productive and engaged in lessons, which facilitated their ability to fulfil lesson objectives. My activity during lessons echoes this. On the whole, classroom management was simpler. There was less off-topic discussion during independent activity, meaning that I did not have to prompt students to manage their distraction levels. This could be seen as evidence of students' engagement with the task. I continued with the *gamified* lesson format after the end of the sequence, at the request of the students, and their class teacher.

Emily Evans graduated from Kings College London with a PGCE in Latin (with Classics) emily-b-evans@hotmail.co.uk

If you enjoyed this article, you might also read Pike, M. (2016). Gamification in the Latin Classroom. *Journal of Classics Teaching* 32, pp. 1-7.

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