

IL131-15 Serious Tabletop Game Design and Development

24/25

Department

Institute for Advanced Teaching and Learning

Level

Undergraduate Level 3

Module leader

Chris Evans

Credit value

15

Module duration

10 weeks

Assessment

100% coursework

Study location

University of Warwick main campus, Coventry

Description

Introductory description

You are creative. You are playful. You are intellectual. You want to make an impact on learning. You want to make a difference in your classroom. You want to make a serious game. Serious games are games played for a learning purpose and not only amusement. Serious games are increasingly used in education and employee training as an alternative to conservative or standardised approaches to learning; therefore, the purpose of this module is to engage students-as-creators in supporting them with the process of idealising, designing, developing, testing and delivering a serious game.

[Module web page](#)

Module aims

Serious games are increasingly used in education and employee training as an alternative to conservative or standardised approaches to learning. The principal aim of the module, therefore, is to engage students-as-creators in supporting them with the process of idealising, designing, developing, testing and delivering a serious game.

In order to achieve this, the module will:

- Develop students understanding of serious games, including what they are and how they are created
- Critically explore the relationship between games and motivation, student engagement, inclusivity, game immersion, and employability
- Support the management of own learning in using a flipped classroom approach and engaging in seminars and activities that involve playing games and critically reflecting on these experiences
- Support students in designing their own serious tabletop game that can be used in a Warwick classroom

Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

The module will adopt a flipped classroom approach consisting of online preparation and face-to-face seminars and activities. Students will play a variety of games each week as well as analyse and critique them using theory and reflection. Each week is centred on a specific element of game design and/or play, followed by a seminar in which students engage with various games to highlight the complexities of serious games. Students will use this as a foundation for reflecting and creating their own serious game.

Weekly topics may include:

“Welcome to serious Tabletop Games”

“Why so Serious?”

“Thinking about Design”

“Game Narrative and Storytelling”

“Player Psychology – Why Do People Play Games”

“Mechanics, Dynamics, Aesthetics”

“Technology and Serious Games”

“Prototyping and Playtesting”

“Game Review”

“Launching, Marketing, Selling”

Learning outcomes

By the end of the module, students should be able to:

- Display a systematic understanding of the main concepts of game culture and theory.
- Critically evaluate game taxonomies and identify the specific characteristics of each game

type.

- Carry out analyses and user tests, judging the reliability, validity and significance of evidence, to support conclusions, to understand users' demands and needs and convert them into serious game requisites (including learning objectives for game-based learning).
- Consolidate and extend understanding of concepts related to game play, game flow, interactive narratives, storytelling and apply them in practice to develop a game for learning.
- Demonstrate confidence and flexibility in understanding and identifying the main tools available and steps required to develop games and to identify the best one for a specific purpose.
- Apply creative skills to idealise, design, develop, test and deliver a serious game.
- Demonstrate an understanding of how specific learning objectives may be achieved within the design of a serious game.

Indicative reading list

1. Illustrative Bibliography Core Readings

Schell, J, 2008. *The Art of Game Design: A Book of Lenses*. MA, USA: Elsevier.

Kapp, 2012 . *The Gamification of Learning and Instruction*. CA, USA: Pfeiffer.

Week 1 (“Go: Welcome to serious tabletop games”):

Kapp, 2012 . What is Gamification? *The Gamification of Learning and Instruction*. CA, USA: Pfeiffer, pp. 1-25.

Scott, P., 2018. Board Games Are Growing In Popularity and Diversity, Thanks to Millennials. wbur [online] Available at: <https://www.wbur.org/artery/2018/07/05/board-games-diversity-millennials>.

Fron, J., Fullerton, T., Ford Morie, J., and Pearce, C., 2007. The Hegemony of Play. *Proceedings of DiGRA 2007 Conference*, p. 4-7.

Week 2 (“Ready Player One”):

Bartle, R., 1996. Hearts, clubs, diamonds, spades: Players who suit MUDs. *Journal of MUD research*, 1(1), p.19.

Garris, R., Ahlers, R. and Driskell, J.E., 2002. Games, motivation, and learning: A research and practice model. *Simulation & gaming*, 33(4), pp.441-467.

Keller, J.M., 2010. What is motivational design?. In *Motivational design for learning and performance* (pp. 21-41). Springer, Boston, MA.

Week 3 (“Why so serious?”):

Jefferies, D. 2016. ‘Serious’ Games Finally Find Their Fun. Next [online]. Available at: <https://howwegettonext.com/serious-games-finally-find-their-fun-f1fa6b39b1e7>

Orbanes, 2002. Everything I know about business I learned from MONOPOLY. Harvard Business

Review, 80(3), pp. 51-57.

Treher, E. N. Learning with Board Games: Tools for Learning and Retention. The Learning Key Inc. [online] Available at: <https://thelearningkey.com/>

Deterding, 2012. Gamification: designing for motivation. *Interactions*, 19(4), pp. 14-17.

Wouters, van Nimwegen, van Oostendorp, & van der Spek, 2013. A Meta-Analysis of the Cognitive and Motivational Effects of Serious Games. *Journal of educational psychology*, 105(2), p. 249.

Week 4 ("Let's get serious"):

Razzouk & Shute, 2012. What Is Design Thinking and Why Is It Important?. *Review of Educational Research*, 82 (3), pp. 330-348.

Hayes & Games, 2008. Making Computer Games and Design Thinking. *Games and Culture*, 3 (3-4), pp. 309-332.

Taspinar, Schmidt, & Schuhbauer, 2016. Gamification in education: a board game approach to knowledge acquisition. *Procedia Computer Science*, 99, pp. 101-116.

Week 5 ("Once upon a time: Game narration and storytelling"):

King, D.L., Haagsma, M.C., Delfabbro, P.H., Gradisar, M. & Griffiths, M.D. 2013. Toward a consensus definition of pathological video-gaming: A systematic review of psychometric assessment tools. *Clinical psychology review*, 33 (3), pp. 331-342.

Borsari, B. 2004. Drinking Games in the College Environment: A Review. *Journal of Alcohol and Drug Education*, 48 (2), p. 29.

Lazzaro, N. 2004. Why We Play Games: Four Keys to More Emotion Without Story. In: A. Sears and J. Jacko, eds. *Human-Computer Interaction: Designing for Diverse Users and Domains*. Boca Raton: CRC Press. Ch. 10.

Sullivan, A. & Salter, A. 2017. A taxonomy of narrative-centric board and card games. *Proceedings of the 12th International Conference on the Foundations of Digital Games*, p. 23.

Week 6 ("Players gonna play"):

Kapp, 2012 . Achiever or Killer? Player Types and Game Patters. *The Gamification of Learning and Instruction*. CA, USA: Pfeiffer. Ch. 6.

Rowe, J. et al, 2011. Integrating learning, problem solving, and engagement in narrative-centered learning environments. *International Journal fo Artificial Intelligence in Education*, 21 (1-2), pp. 115-133.

Rowe, J.P, Shores, L.R., Mott, B.W. and Lester, J.C., 2010. A framework for narrative adaptation in interactive story-based learning environments. *Proceedings of the Intelligent Narrative Technologies III Workshop*, p. 14.

Week 7 ("Do you know what really grinds my gears?: Part One"):

Schell, J, 2008. Some Elements are Game Mechanics. *The Art of Game Design: A Book of*

Lenses. MA, USA: Elsevier. Ch. 10.

Arnab, S., Lim, T., Carvalho, M.B., Bellotti, F., De Freitas, S., Louchart, S., Suttie, N., Berta, R. and De Gloria, A., 2015. Mapping learning and game mechanics for serious games analysis. *British Journal of Educational Technology*, 46(2), pp.391-411.

Week 8 (“Do you know what really grinds my gears?: Part Two”):

Serrano-Laguna, Á., Manero, B., Freire, M. and Fernández-Manjón, B., 2018. A methodology for assessing the effectiveness of serious games and for inferring player learning outcomes. *Multimedia Tools and Applications*, 77(2), pp.2849-2871.

Week 9 (“Testing, Testing, 1, 2, 3”):

Bond, J.G., 2014. *Introduction to Game Design, Prototyping, and Development: From Concept to Playable Game with Unity and C*. Addison-Wesley Professional.

Week 10 (“I give it two thumbs up”):

Aleknevicus, G., 2001. *Reviewing Games*. *The Games Journal* [pdf].

Interdisciplinary

This module is taught by staff from different disciplines across the university and attended by students from a variety of departments. It enables students from different disciplines to work together, share knowledge and reflect on individual and others' interdisciplinary learning and experiences. By the end of the module students should be able to apply the creation of serious games to their own discipline.

Subject specific skills

By the end of the module, students should be able to:

1. Appreciate the value of games as a means to train and educate
2. Understand how to apply design thinking and creative strategies in order to produce a prototype/finished product
3. Apply the creation of serious games to own discipline (interdisciplinary thinking)
4. Reflect on the possibility to implementing serious games in different contexts beyond university, such as employment, or different degree programmes
5. Understand the employability skills used in the module as they can be transferred to professional work

Transferable skills

- Analytical skills
- Creativity
- Critical thinking and reflection

- Judgement and decision making
 - Presentation skills
 - Problem solving
 - Time management
-

Study

Study time

Type	Required	Optional
Seminars	10 sessions of 2 hours (40%)	
Project supervision	(0%)	1 session of
Private study	30 hours (60%)	
Total	50 hours	

Private study description

Students take part in a 'flipped classroom' approach by independently preparing for weekly seminars through engagement online with Moodle. Students will be tasked with watching vlogs (prepared by the module leaders), responding to forums, and completing activities and/or reading. It is expected that students will take no more than 3 hours to prepare for each seminar.

Costs

No further costs have been identified for this module.

Assessment

You do not need to pass all assessment components to pass the module.

Assessment group A2

	Weighting	Study time	Eligible for self-certification
Game Review - 1000 words	30%	30 hours	Yes (extension)

All students will produce a game review about a serious game or a game that can be interpreted as serious. Your review requires a thoughtful, academic engagement with the design of the game and your experience playing it. Game reviews will be compiled and shared within a class magazine. Following this assignment, students are encouraged to submit their game review for online or print publication.

	Weighting	Study time	Eligible for self-certification
Serious Game including 1500 word essay, sell sheet and rule book	70%	70 hours	Yes (extension)
<p>The student will design a serious tabletop game that can be used to teach a subject, typically based on one of their degree modules (students are free to select a module of their choice that they have taken part in during their degree studies). Following budget approval, prototypes of the students' games may be professionally produced for those games which have the necessary level of content created. Students will utilise the material delivered each week to design their game.</p> <p>In addition to creating a game, the student must also submit a rule book, a sell sheet (or sales flyer) which is a single-page document designed to provide product information to a potential customer, and a 1500 word essay justifying and critiquing their design. Students will be marked on the quality of their produced game and the written justification for the game engaging in theory and practice and how it helps to gamify learning.</p>			

Feedback on assessment

Formative feedback will be given:

- a) as part of tutor-responses to posts made in the online forums;
- b) in discussion with students during seminars and workshops in relation to their assignments;

Detailed written and/or oral summative feedback will be provided by module tutors to individual students for each element of assessment regarding their completed serious tabletop game. Peer feedback will be encouraged during the module, including engagement with online forums, seminar activities, and playing of each other's serious games.

Availability

Courses

This module is Core optional for:

- Year 3 of ULFA-C1A6 Undergraduate Biochemistry with Industrial Placement (MBio)

This module is Option list B for:

- Year 3 of UBSA-C700 Undergraduate Biochemistry
- ULFA-C1A2 Undergraduate Biochemistry (MBio)
 - Year 3 of C1A2 Biochemistry
 - Year 3 of C700 Biochemistry
- Year 4 of ULFA-C702 Undergraduate Biochemistry (with Placement Year)

- Year 3 of UBSA-3 Undergraduate Biological Sciences
- Year 3 of ULFA-C1A1 Undergraduate Biological Sciences (MBio)
- Year 4 of ULFA-C113 Undergraduate Biological Sciences (with Placement Year)
- Year 3 of ULFA-C1A5 Undergraduate Biological Sciences with Industrial Placement (MBio)
- Year 3 of UBSA-C1B9 Undergraduate Biomedical Science
- ULFA-C1A3 Undergraduate Biomedical Science (MBio)
 - Year 3 of C1A3 Biomedical Science
 - Year 3 of C1B9 Biomedical Science
- Year 3 of ULFA-C1A7 Undergraduate Biomedical Science with Industrial Placement (MBio)
- Year 4 of ULFA-CB18 Undergraduate Biomedical Science with Placement Year
- Year 3 of ULFA-B140 Undergraduate Neuroscience (BSc)
- Year 3 of ULFA-B142 Undergraduate Neuroscience (MBio)
- Year 3 of ULFA-B143 Undergraduate Neuroscience (with Industrial Placement) (MBio)