Striving for authentic social constructivism in online learning; Examples from postgraduate Law & Humanities

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Constructivist and social constructivist processes have long been promoted to foster deep learning opportunities for students as active contributors to their learning. A separate but related focus reminds tertiary educators to promote authentic learning in the age of virtual experiences. However, such learning experiences are not always easy to design in online settings. This paper brings these learning concepts together through sharing examples of authentic social constructivist learning designs in the online space, with subjects from the disciplines of Law and Humanities and taught into an interdisciplinary Master of Cybersecurity degree. The learning design examples of the respective subjects are presented and discussed in an authentic social constructivist context.

Keywords: Online learning; social constructivist; authentic learning; practitioner perspectives.

Introduction

Constructivism positions students as active learners who interpret and interact with their worlds in an iterative and non-linear building process using structures, activities and language for meaning-making to occur (Fosnot & Perry, 2005). Online constructivist learning can be characterised as "discussion-oriented, authentic, project-based, inquiry-focused, and collaborative" within "environments that support critical reflection and experiential processes" (Huang, 2002, p.35). Constructivist theory can help inform online learning, although there have been calls for more research focused on aligning elements of online learning environments with constructivism (Swan, 2005), and in determining what constructivism brings to the practice of teaching (Fosnot & Perry, 2005).

Building on constructivism, social constructivism is a learning process where knowledge is constructed via community social interactions (Palincsar, 1998; Swan, 2005). Palincsar (1998) affirmed the inseparability of social and individual learning processes within knowledge co-construction, and that learning is dependent on sociocultural contexts. Methods of teaching that support social constructivist experiences ensure students engage collaboratively with realistic problems, such as case-based or problem-based learning or other collaborative tasks to promote deeper, transferable learning opportunities (Hanson & Sinclair, 2008; Swan, 2005). Realistic problems should be culturally and contextually specific (Palincsar, 1998).

This paper shares learning design details from two subjects, one in Law and the other in Humanities. Both subjects are taught into the same Master of Cybersecurity degree in an Australian university, and both use authentic social experiences to facilitate student learning. Design features of the subjects are presented and discussed in regards to characteristics of authentic social constructivist online learning (adapted from Hanson & Sinclair, 2008 and Herrington et al, 2014). These examples are shared via practitioner perspectives to facilitate further discussion and potential enhancements to social constructivist learning in the online space.

Social constructivist learning with real-world contexts in the online space

It is long understood that social interactions utilising the tool of language form essential elements to knowledge construction in a wide range of learning environments, including various educational sectors both pre and during the digital age (e.g. Dewey, 1938; Hanson & Sinclair, 2008; Lefoe, 1998; Palincsar, 1998; Swan, 2005; Vygotsky, 1962; Woo & Reeves, 2007). Swan (2005) positions online social constructivism as dependent on a community-centered design. That is, to strengthen online learning the setting needs to support, value and encourage student participation, with community expectations of seeking understanding via collaboration and negotiation of meaning, and where "multiple perspectives are respected and incorporated into collective meaning making… [with learning] situated in authentic "real-world" problem solving" (Swan, 2005, p.9).

While social constructivism is generally viewed as a learning theory and not a teaching methodology (Fosnot & Perry, 2005), Hanson and Sinclair (2008) use a social constructivist teaching methods perspective to review the characteristics for engaging students in collaborative problem solving. The left-hand column of Table 1 gives an adaptation of their contextualised list. Herrington and colleagues, meanwhile, frame authentic learning in the age of technology via nine characteristics based on an authentic learning perspective (e.g. Herrington, Reeves & Oliver, 2010; 2014). In this approach, learning designs offering authentic contexts reflective of the use of knowledge in real life can enhance authenticity via integration of collaborative group tasks, for example, public articulation of ideas and enabling social then individual thinking (Herrington et al, 2010). Authentic learning characteristics, as updated by Herrington et al (2014), can be aligned to the problem-solving social constructivist characteristics relayed by Hanson and Sinclair (2008). Given constructivism's advocacy of real-word examples and authentic learning experiences (Huang, 2002), and that authentic learning and assessment, which is tied with real-world performance rather than dormant knowledge, "is solidly based on constructivism… [that] recognises the learner as the chief architect of knowledge building" (McLoughlin & Luca, 2000, p.517), we bring these ideas together in an authentic social constructivist approach as shown in Table 1.

Table 1: Social constructivist characteristics in the context of authentic, collaborative problem solving

Social constructivist problem-solving characteristics (Hanson & Sinclair, 2008)	Authentic learning characteristics (Herrington et al, 2014)	Extrapolated characteristic for authentic social constructivist learning online
All learning and assessment activities start with and iteratively return to realistic problems	Authentic contexts: complex, purposeful; motivates exploration; reflects application in real-life	**[1] Online provision of:** **- realistic problems applicable to real-life contexts**
Engage with collaborative problem-solving activities, under the close supervision and coaching of an educator	Authentic activities: ill-defined problem requiring subtasks; integrated with assessment	
	Coaching and scaffolding: some deliberate facilitation and scaffolding supports	**[2] Online facilitator modelling, coaching and scaffolding**
Lecturers act as model inquirers by scaffolding the process of collaborative problem solving; gradually fade to a coaching role where they facilitate critical reflection on group interaction	Experts and modelling: access to expert performance/modelling/ thinking	
	Coaching/scaffolding (as above)	**[3] Online guidance for reflection on learning & group interaction**
	Reflection: meaningful reflection on learning	
Small groups collaboratively solving the problem	Collaborative construction of knowledge: pairs/groups collaboratively solve real-world problems and construct knowledge through the process	**[4] Collaborative online learning/assessment tasks**
Teamwork: some task distribution among members; all members accountable to group		**[5] Resources and guidance for:** **- learning participation in the task/s** **- technological participation in the task/s**
Group self-management or self-direction to decide learning needs to better understand the problem		
Dialogue and the negotiation of shared understanding (as central to the process)	Articulation: express understanding and/or gaps in understanding; present reasoning	**[6] Resources and guidance for:** **- participation in online discussion and negotiation** **- multiple perspectives**
	Exposure to multiple perspectives	
Activity purpose beyond problem solving to learn and construct knowledge; can generalise beyond specific problems	Authentic assessment: demonstrate effective application of and performance with new knowledge	**[7] New knowledge applied in:** **- different or evolving contexts in online space** **- eventual workplace roles**

Online learning examples of postgraduate authentic social constructivist

In this section, two postgraduate examples are offered, while simultaneously discussing their design in relation to the social constructivism and authentic learning literature aligned to Table 1. The examples are *Surveillance and privacy in the digital age* (Law) and *Issues management in strategic communication* (Humanities). Both subjects are taught online into the same interdisciplinary Master of Cybersecurity degree as intensive six-week online subjects, as well as in various on-campus or hybrid modes in other postgraduate degrees.

There are some noted commonalities in online design across the two subjects. First, both assessment designs offer demonstration and application of new knowledge in an authentic context relevant to the students' anticipated future workplace. This includes an assessment piece achieved collectively with others. This is consistent with the work of Boud and Falchikov (2006) on viewing assessment in terms of participation in practice beyond graduation and into socially constructed learning in particular contexts (e.g. work), and, where possible, involving cooperation with others. Second, both subjects include socialisation and communication opportunities throughout. They begin with a collaborative online icebreaker activity to reduce barriers between students, introduce them to some initial subject concepts, and encourage practice with subject relevant technology. Further, each subject has general information/communication such as a welcome-to-subject video, general class discussion forums, and responsive/proactive facilitator use of announcements.

Law example: Authentic social constructivist learning in SPD

The subject *Surveillance and privacy in the digital age* (SPD) introduces students to the *Privacy Act 1988* (Cth) and offers the opportunity to explore key legal and policy issues in various dimensions of privacy, including growing concerns about mass surveillance. Case studies drawn from Australia and overseas invite students to engage with a range of relevant perspectives, views and interests. The subject also exposes students to ethical dilemmas in privacy and surveillance and enhances their capacity to develop strategies to address such issues.

Key learning design detail
The four assessments for SPD include subject-wide issues-based discussions and a three-part problem-based scenario. The scenario increases in complexity as it follows a local start-up from their experimental trial through to engagement on large scale commercial and government contracts, then overseas expansion. Each phase introduces new narrative elements which alter the facts so that different aspects of the Australian law, and eventually the overseas law, become relevant. In addition to the law, students must consider the views and concerns different stakeholder groups are likely to have both locally and overseas. The assessments overall:

- Issues-based discussion (class forum for each topic)
- Problem-based scenario (evolving across three parts):
    - Part A – Australian business context (individual written response)
    - Part B – Stakeholder considerations (group role-play and report generation)
    - Part C – International comparison (individual written response)

Social constructivism becomes prominent for the collective activities in the group-based tasks, that is, the class discussion and Part B of the problem-based scenario. The latter involves a preparation step of a group web conference, which is largely administrative for group members to select their role-play roles, but also allows student familiarity with the technology. This is followed by a video conference role-played meeting which is recorded, and finally collaborative work in generating a report.

Learning design alignment to authentic social constructivist online learning
The design aligns to a range of characteristics for authentic social constructivist online learning, as extrapolated from marrying the work of Hanson and Sinclair (2008) to that of Herrington et al (2014) (see Table 1; as italicised and numbered in text). First, the issues-based discussion provides for a *collaborative online learning/ assessment* [4] subject-wide activity. There are six modules (topics) and in each the facilitator poses a complex topic-related question for class discussion, encouraging *application of new knowledge in different contexts* [7]. *Facilitator coaching* [2] and *online guidance for learning and technological participation* [3] occurred via offering the first issues-based discussion as an un-marked practice opportunity to answer a complex question and receive formative feedback. Additionally, end of subject assessment submission simply requires students to submit a document listing the two topics whose discussions they want to be graded on. Students are encouraged to *reflect on their learning and group interaction* [3] in making their choice. The Marking Rubric includes a section for "contributes effectively to the discussions by sharing and responding to peers in a thoughtful and collegiate way" worth 10%, proving further encouragement to *collaborate in online learning/assessment* [4].

Realistic problems applicable to real-life contexts [1] are provided primarily via the problem-based scenario. It involves a modern-day scenario of an Australian start-up company XYZ. The company needs advice tackling complex issues related to privacy and surveillance, which are further complicated upon consideration of expansions in their services. There are questions of how this might affect others in the broader community, and then how expansion into overseas markets may change the rules in which they operate. Providing legally appropriate advice to the company requires *application of new knowledge in evolving contexts* and as relevant to potential *eventual workplace roles* [7]. SPD *facilitator scaffolding* [2] occurs by staging the scenario in three messy but manageable stages, via parts A, B and C, and by providing feedback after each part is completed.

The role-play component or Part B of the problem-based scenario is a primary social constructivist learning opportunity for the SPD students, as a *collaborative online learning and assessment task* [4] provoking *multiple perspectives* [6]. Completing this task involves multiple steps and two forms of evidence. The first is a meeting conducted online and recorded (the 'role play'). The second is a written report from the group. *Facilitator coaching and scaffolding* [2] and *online guidance for learning and technological participation* [5] occurred via early group engagement in organising a web meeting to delegate roles for both the role-play (in which each member represents the interests of a particular stakeholder) and group management processes based on options provided by the facilitator, and to practice using the technology and recording the meeting. Students meet via online technology before the stress of looming assessment dates and are supported with technological guides. Difficulties in using the technology aim to be sorted before the groups' more critical role-play web meeting.

To encourage productive meetings and collaborative drafting of meeting reports, *online resources and guidance* are provided for *participation in online discussion and negotiation* [6]. Student groups are asked to prepare prior to their meeting by deciding on a shared document format (e.g. Google doc or Office 365 with instructions provided), and by preparing draft positions. They are guided to aim for consensus, but if not reached, to document the points of difference for the role-played stakeholder groups. The final document is based on the group's discussion, agreed to by all group members, and includes the URL for the recorded role-play.

Humanities example: Authentic social constructivist learning in IMSC

In an increasingly complex, interconnected and globalised world, the subject *Issues Management in Strategic Communication* (IMSC) offers students skills and knowledge prized by organisations cognisant of public sentiment, reputation protection and the preservation of public trust. Students examine issues management across government, not-for-profits, businesses, including techniques and strategies for understanding the potential for issues to emerge from both expected and unexpected events. They learn formal strategies and techniques to provide effective planning for and responses to these issues aiming to maintain reputations and public confidence. Case studies illustrate the historical foundations of this field and the ongoing challenges which each cultural situation provides. In the Master of Cybersecurity, case studies, learning activities and assessment tasks are presented in the context of cybersecurity and the online environment, with specific attention given to issues and crisis management as applied to cyberterrorism, data breaches and hacking.

Key learning design detail
The assessment tasks designed for IMSC scaffold the formal strategies and techniques of the real-world process, from issue and crisis identification (including differentiation and yet to emerge issues), through to constructing comprehensive plans to deal with the issue/crisis via strategic communication. The three assessment tasks are:

- Video presentation – identify and analyse a real issue or crisis (post video to forum and discuss with class)
- Issues management plan – write plan for organisation facing an issue identified in environmental scanning
- Crisis management plan and crisis communication plan – write corresponding plans for a crisis evolved from the issue in the prior issues management plan.

Social constructivism becomes prominent for the community-styled activities in the student-generated video presentation discussions, and for case study crisis analysis activities in Module 2 of IMSC (equivalent to weeks 3-4 of a regular semester). Module 2 challenges the students to work together as if already in the field of strategic communications to analysis an issue or crisis that has occurred. They form groups to examine a specific case and work through the crisis to build collective critical analyses as wiki resources.

Learning design alignment to authentic social constructivist online learning
The case study crisis analysis activities in Module 2 of IMSC provide *realistic problems applicable to real-life contexts* [1] in the form of three recent and publicly known cases of real-world crisis situations that have a cybersecurity component. As a *collaborative online learning task* [4], student groups each critically analyse one case study, and practice articulating the factors that comprise the specific crisis. *Online facilitator coaching* [2] is offered mid-module via a web-conference session, for students to discuss with the facilitator (and each other) their progress in both learning and group relations, thus providing additional *online guidance for learning participation in the task* [5] and *reflection on learning and group interaction* [3]. *Online resources and guidance for technological participation in the activities* [5] is provided via instructions and further support resources related to how to access and contribute to the group wiki tool and the web conference session.

Additional *online guidance for reflection on learning and group interaction* [3] is provided in the closing stages of Module 2, when students are encouraged to read the wikis of other groups to widen the learning experience and view the *new knowledge applied in the different contexts* [7] of the various cases. At this stage students can also view the wrap-up video for their case (with the other cases also available to view), as presented in the view of a strategic communication expert in the university. This allows further *online modelling* [2] and, along with the *multiple perspectives* [6] in the various resources in the case packages, further perspectives provide exposure to other points of view enabling further *online guidance for reflection on learning* [3]. This is an important inclusion as conflated analysis and interpretations reveal the non-binary and social contextualisation of criticism. This is in contrast with many cybersecurity information technology contexts where 'solutions' would be considered binary outcomes. Overall, the case study crisis analysis activities require *application of new knowledge in different contexts in the online space* [7], that is, different to contexts in their assessment tasks.

Conclusion and next steps

This paper introduces the concept of authentic social constructivist learning and defines its seven key characteristics. The paper shares, via the learning designs of two online subjects, how practitioners applied these in the contexts of Law and Humanities. Various ways to engage were embedded across the subjects, yet not all students availed themselves of the opportunities afforded in these designs. Without direct student data, it is impossible to know the full range of reasons for this. Evaluation of student engagement with and perceptions of the range of social constructivist learning activities is currently in planning. Further work could examine operationalisation and scalability of the approach, including how to build wider acceptance of academic and learning designer colleagues for this approach. The table offered in this paper provides an informative, logical tool, which could be adopted and adapted by others in further authentic social constructivist online contexts.

The subject facilitators are alert to keeping their respective subjects authentic and current. The SPD coordinator updates scenario elements in response to active involvement with the sector. The IMSC coordinator recently posted a new case to the class highlighting the then running crisis of the Facebook/Cambridge Analytica data breach, finding that the posting of an 'active' case-study and the ongoing real problems flowing from the issue provided an authentic and immediate social context with a genuine and flowing impact. Having an issue currently being debated in the 'public domain' analysed in a private learning context, with the tools outlined in the subject, highlighted the social immediacy and the ongoing value and application of skills taught. The authors are also exploring the use of crisis simulation software for use in IMSC assessment. The software runs a simulated crisis in real-time where participant students are required to 'solve' the crisis via online collaboration. The simulation requires a multi-layered and coordinated response set against a time-impact evaluation.

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References

Boud, D. & Falchikov, N. (2006). Aligning assessment with long-term learning. *Assessment & Evaluation in Higher Education*, 31(4), 399-413. http://dx.doi.org/10.1080/02602930600679050

Dewey, J. (1938). *Experience and education*. New York, NY: Kappa Delta Pi.

Fosnot, C.T. & Perry, R.S. (2005). Constructivism: A psychological theory of learning. In C.T. Fosnot (Ed.) *Constructivism: Theory, perspectives, and practice* (2nd ed.), (pp.8-38). New York: Teachers College Press.

Hanson, J.M. & Sinclair, K.E. (2008). Social constructivist teaching methods in Australian universities – reported uptake and perceived learning effects: a survey of lecturers, *Higher Education Research & Development*, 27(3), 169-186. https://doi.org/10.1080/07294360802183754

Herrington, J., Reeves, T. C., & Oliver, R. (2010). *A guide to authentic e-learning*. New York, NY: Routledge.

Herrington, J., Reeves, T.C. & Oliver, R. (2014). Authentic learning environments. In J.M. Spector et al. (eds.), *Handbook of research on educational communications and technology*, pp.401-412, New York: Springer. https://doi.org/10.1007/978-1-4614-3185-5_32

Huang, H-M. (2002). Toward constructivism for adult learners in online learning environments. *British Journal of Educational Technology*, 33(1), 27–37. https://doi.org/10.1111/1467-8535.00236

McLoughlin, C. & Luca, J. (2000). Assessment methodologies in transition: Changing practices in web-based learning. In L. Richardson and J. Lidstone (Eds), *Flexible Learning for a Flexible Society*, 516-526.

Proceedings of ASET-HERDSA 2000 Conference, Toowoomba, Qld, 2-5 July 2000. ASET and HERDSA.

Swan, K. (2005). A constructivist model for thinking about learning online. In J. Bourne & J. C. Moore (Eds), *Elements of quality online education: Engaging communities*. Needham, MA: Sloan-C.

Vygotsky, L. (1962). *Thought and language*. Cambridge, MA: MIT Press.

Woo, Y. & Reeves, T.C. (2007). Meaningful interaction in web-based learning: A social constructivist interpretation. *The Internet and Higher Education*, 10(1), 15-25.https://doi.org/10.1016/j.iheduc.2006.10.005

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