

RLT 30 YEARS

Research in Learning Technology: making friends and influencing people

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The first issue of *Research in Learning Technology (RLT)* was published in 1993. Over 30 years, the journal has comprised an informal research and development facility for new ideas and practices in technology enhanced learning. This paper takes nine published articles from *RLT*: the three most downloaded in the period January 2021 – March 2023 (but published at any time); the three most downloaded articles published from January 2021 to March 2023; and the three most cited articles published from January 2018 to March 2023. The aim is to identify different areas of current interest and influence, different areas of practice, and different scholarly approaches. The authors are the journal's current editorial team. This paper identifies diversity of technology enhanced learning-related subject matter and different approaches, too, but with ongoing interest in efficacy and in the 'how' of technology enhanced learning: how technology can be applied to truly enhance learning, comprising an approachable community, generating influence.

Keywords: Research in Learning Technology; Retrospective; Technology Enhanced Learning; Review; Journal History; Technology.

Introduction

The first issue of the *Association for Learning Technology Journal* (subsequently renamed *Research in Learning Technology [RLT]* in 2011) was published in the year the Association began, 1993, in hard copy only, by the University of Wales Press. Its opening editorial argues for learning technology being convenient and easy to use: 'If the teacher or learner is having to tweak the technology, or ending up with a half-baked implementation because the setting-up process has proven too difficult, the learning tool may well be left to gather dust' (Jacobs 1993, p. 2). Elsewhere, the editorial extols the fax machine and notes the increasing embeddedness of word processing. There is, therefore, an extent to which, unsurprisingly, a 30-year-old

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text is dated, but it is not wholly dated. The same editorial also points out that increases in student numbers might well create pressure towards more technology enhanced learning, putting tension on quality. The first issue also contains an early article on virtual reality, noting its 'surrogate tacto-audio-visual experiences' (Barker 1993, p. 16). The overall picture across a 30 years span, therefore, is one of change, certainly, but also continuity. Changes in specific technology tools; enduring explorations into their efficacy, costs and contexts. In the third decade of the 21st century, learning is commonly, even ubiquitously, facilitated via digital technology but there remains a vital need for a community of practitioners and academics who analyse how technology can support learning; what kinds of technologies are well suited to particular tasks; the role of technologies in supporting the development of an enhanced learning experience in which questions of equality, diversity and inclusion are central; and questions of ethics in climates of digital surveillance.

In this paper, nine *RLT* articles are summarised and analysed by the current *RLT* editorial team. This paper comprises an aggregation of areas of interest, areas of practice and scholarly approaches. The paper summarises and analyses the three articles in *RLT* most downloaded during the period January 2021–March 2023 (but published at any time since 1993), the three most downloaded articles published between January 2021 and March 2023, and the three most cited articles published from January 2018 to March 2023, forming a corpus of nine papers (Table 1).

Each article is summarised and analysed by a member of the *RLT* editorial team. By these means, the article looks at current areas of interest for both writers and readers of *RLT*, together with the most influential, impactful articles over the last five years, providing a sense of the field, its areas of interest and its impact over both a short and mid-term perspective. Lessons are drawn from the papers concerning where the journal makes a substantial contribution and how the journal might productively develop hereafter.

1. Kearney et al. (2012). Viewing mobile learning from a pedagogical perspective

This article develops a framework for mobile learning (m-learning) and validates it by applying it to articles about m-learning approaches. The framework proposed is first explained using a Venn diagram of three interconnected distinctive features of m-learning: authenticity, collaboration and personalisation. The paper goes on to refine the m-learning framework and the final version is presented with concentric circles (reminiscent of Bronfenbrenner's [1979] Ecological Systems Theory).

Theoretically, the paper draws on ideas from socio-cultural theory (Vygotsky 1978), with writing of other key socio-cultural technology enhanced learning authors (Laurillard 2007; Pachler *et al.* 2009; Sharples *et al.* 2007). The framework proposed in the paper has been developed using principles of action learning from Kemmis and McTaggart (1988). Its pedagogical concepts are derived from practice in schools across the UK and Australia. This gives it robustness and authority and is validated by key quality processes.

The framework for m-learning is explained in the body of the paper and it describes what each of the three features of m-learning, authenticity, collaboration

Table 1. The nine selected articles of RLT based on citation and download figures (in chronological order).

Selected Paper	Reason for inclusion	Statistics
1. Kearney <i>et al.</i> (2012). Viewing mobile learning from a pedagogical perspective	3 most cited articles, 1993–2023	276 Crossref citations, 390 Scopus citations
2. Atenas & Havermann (2014). Questions of quality in repositories of open educational resources: a literature review	3 most downloaded articles, downloaded between 2021 and 2023	File downloads: 8530
3. Kauffman (2015). A review of predictive factors of student success in and satisfaction with online learning	3 most downloaded articles, downloaded all times & 3 most cited articles, 1993–2023	File downloads: 37 504 & 173 Crossref citations, 224 Scopus citations
4. Manca (2018). ResearchGate and Academia.edu as networked socio-technical systems for scholarly communication: a literature review	3 most cited articles, 2018–2023	36 Crossref citations File downloads: 2554
5. Allcoat & Von Mühlenen (2018). Learning in virtual reality: Effects on performance, emotion and engagement	3 most downloaded articles, downloaded all times & 3 most cited articles, 1993–2023 & 3 most cited articles, 2018–2023	File downloads: 13 924 & 143 Crossref citations, 151 Scopus citations & 143 Crossref citations
6. Tanis (2020). The seven principles of online learning: Feedback from faculty and alumni on its importance for teaching and learning	3 most downloaded articles, downloaded between 2021 and 2023 & 3 most downloaded articles, 1993–2023 & 3 most cited articles, 2018–2023	File downloads: 8543 & File downloads: 13 169 & 55 Crossref citations
7. Parrella <i>et al.</i> (2021). Measuring the correlation between digital media usage and students' perceived writing ability: Are they related?	3 most downloaded articles, published & downloaded between 2021 and 2023	File downloads: 3259
8. Lawrence & Fakuade (2021). Parental involvement, learning participation and online learning commitment of adolescent learners during the COVID-19 lockdown	3 most downloaded articles, published & downloaded between 2021 and 2023	File downloads: 15 445
9. Humphries & Clark (2021). An examination of student preference for traditional didactic or chunking teaching strategies in an online learning environment.	3 most downloaded articles, published & downloaded between 2021 and 2023	File downloads: 3433

and personalisation, look like in practice when done well or not. For instance, there are examples of practices with a high level of authenticity, and others with low levels.

The authors validate their framework by using it to analyse 30 articles that focus on m-learning and argue that the framework helps to interrogate the effectiveness of the practices reported. They also assert that the framework is useful for teachers as a tool to interrogate their m-learning practice.

In its conclusion, the paper summarises what the authors believe to be the most significant features of m-learning:

Central to the idea of m-learning is that learning contexts can be generated by students; occurring in different places and at different times and not confined to formal learning settings in institutions. Informal learning environments characterised by fluid geographical boundaries and malleable, socially negotiated time frames need further investigation with these goals in mind. (Kearney *et al.* 2012, pp. 14–15)

Hence, it is particularly concerned with the flexibility of time and place that m-learning facilitates, but does not focus on the role of the teacher to support and structure the learning. In this regard, it has elements that appear, now, to be rather dated and limited in scope.

The paper was submitted in 2010 and published in 2012, following the rise in mobile devices during the early 21st century. Although the article was written about an emerging technology, it has stood the test of time well by being theoretically informed. The value of the article is in proposing a framework that helps to identify key aspects of learning using mobile devices.

2. Atenas & Havermann (2014). *Questions of quality in repositories of open educational resources: a literature review*

Atenas and Havermann's paper, submitted in 2013 and published in 2014, made an important contribution to the literature by leveraging a review of existing literature into a proposed method for the shaping and evaluation of Repositories of Open Educational Resources (ROER). One hundred and twenty-two peer-reviewed books, conference papers, and peer-reviewed journal articles were reviewed and analysed in order to identify those that specifically focus on ROER, explicitly reference good practices, and explicitly discuss deficits in ROER design. They identify key points relating to the potential for open practices to facilitate lifelong learning, widen participation in higher education, increase social inclusion, etc. while also identifying the clash between these drivers towards openness and academic culture's tendency towards closedness, individualism, and excess work demand that does not easily allow for engagement with new pedagogical practices or related technologies.

Based on their literature analysis, Atenas and Havermann identify four key themes, reporting that ROER exist to facilitate educators in: searching for content (1. Search), sharing their resources (2. Share), reusing and evaluating others' materials (3. Reuse), and adapting the materials of others, possibly in collaboration with other community members (4. Collaborate). The authors make a distinction between social and technical

characteristics of an ROER, in that social domain openness relates to expectations around what benefits can be derived from Open Educational Practices (OEP) and technical domain openness relates to degrees of technical functionality and interoperability.

The authors highlight that producing and sharing learning resources has been made easier through the affordances of technological advances in computing and internet connectivity. Drawing on the literature, Atenas and Havemann (2014) connect this ability to create and share OER as a vehicle for widening participation in higher education, facilitating lifelong learning, widening access to knowledge, encouraging educator creativity, and increasing social inclusion, gender inequality, etc. Another key point made is that opening up academic practice needs both cultural change and better technology, and that barriers to this change include a lack of organisational incentives, and maybe expertise, for educators in the sharing of learning resources along with an academic culture that does not encourage these behaviours. It is posited that, in order to facilitate educator engagement with OER and OEP, tools such as ROER need to be in place to aid in the effective creation, sharing, discovery, and reuse of quality OER.

While the ‘openness’ front has widened, academic culture continues to be very resistant to change. The issues impacting on ROER described in this paper also still dog the effectiveness of many ROER in terms of facilitating engagement with OER and OEP, as authors still publish papers discussing the challenges in this area (e.g. see Baas *et al.* 2022; Tlili *et al.* 2021). Wider, sectoral tensions also continue to bring their influence to bear, which could be seen during the COVID-19 pandemic in the tension between the way in which educational technology companies capitalised on the opportunity to offer their services and products to institutions at the same time as bodies such as UNESCO made efforts to promote ways to make education sustainably open and flexible (Williamson *et al.* 2020).

3. Kauffman (2015). A review of predictive factors of student success in and satisfaction with online learning

Kauffman’s paper, submitted in 2014 and published in 2015, reviews literature relating to student success in, and satisfaction with, online learning. Based on their narrative synthesis, Kauffman makes key claims on the effectiveness of online learning as a study mode, the main claim being that research shows online learning to be as effective as learning in a traditional, face-to-face mode, allowing for contextual factors.

The claim relating to the effectiveness of online learning continues to be an important one, given the resurgence of comparative studies seen during the COVID-19 pandemic. Kauffman also calls out essential points on the relationship between design principles and the quality of online learning, this is to say that: a design approach is needed to ensure constructive alignment between course objectives, methods of teaching, and assessment; and that a purposeful online learning design, and especially a constructivist-based design, has a positive impact on the student experience. Again, given the current risk of conflation between pandemic-era approaches to emergency-remote teaching and designed online learning, this key claim is as important in 2023 as in 2015.

Drawing on the literature, Kauffman indicates that while there are different design models in use, it is the case that an integrated course design model, with adaptable, unstructured content, and an actively facilitated online discussion is preferred by

students. Kauffman suggests that a constructivist-based design approach facilitates self-directed learning skills, a greater focus on the learning process as opposed to just on grades etc., and a sense of community. This is in contrast to literature that identified a lack of community, along with technical difficulties, as a barrier to online learning. Time management and instructor feedback are also identified as facilitators of successful online study.

With regard to course content/discipline, Kauffman draws on the literature to emphasise the importance of constructive alignment in online learning, and that the way designing for constructive alignment is carried out can be different across disciplines, as different knowledge/types of knowledge are needed in different disciplines.

A review of the literature relating to learner characteristics summarised that self-regulation and time management, emotional intelligence, and motivation are important factors in online learning, while factors like technical skills are less important in terms of being a barrier.

A strength of the paper is the inclusion of a lengthy section suggesting potential future research, suggesting a focus on areas such as: peer feedback, instruments to assess student readiness for online learning, proficiency of course instructors in course design, the impact of course size on outcomes, and the use of technology in online learning to meet the needs of students with disabilities.

4. Manca (2018). ResearchGate and Academia.edu as networked socio-technical systems for scholarly communication: a literature review

This paper is an analysis of 39 empirical studies published in peer-reviewed journals that have a specific focus on ResearchGate and Academia.edu. The aim of meta literature review is to describe the status of the research and identify gaps and priorities in the areas of scholarly networked learning and scholarly platforms. Using socio-technical and techno-cultural approaches, the paper first examines both companies' operations and user experiences of a homepage, newsfeeds and ranking systems.

The corpus of the study was collected through an extensive search in interdisciplinary databases using the keywords 'ResearchGate' and 'Academia.edu' applied separately, and distinct search criteria for each source, including studies that appear in English language academic journals, report empirical findings, and present research questions and documentation of all procedures. Reporting on the demographics of these studies, the majority of papers investigated ResearchGate (59%), while only 7.7% focussed exclusively on Academia.edu, with the remaining 33% looking at both. The number of published articles on the topic grew exponentially in 2016 and 2017, with European authors accounting for almost half of the total. Of the papers, the majority were published in social sciences and physical sciences journals, with quantitative measures being the most widely employed investigation method. Few studies made explicit mention of a theoretical framework or conceptual background. Curiously, very few papers in this review came from education publications, which Manca speculates is indicative of a reticence in empirical approaches in the discipline. Recommendations include the need for specific research on open and distributed learning achieved in scholarly social networks according to a networked learning perspective. The lack of research on how platforms can make scholarship more accessible to a wider public, Manca argues, is symptomatic of a general reluctance towards open scientific scholarship. Noticing the correlation between quantitative research and

theoretically under-informed scholarship, Manca suggests that cross-fertilisation of Social and Networked Participatory Scholarship methodologies could shed light on academics' practices on these platforms as they build their reputations and networks.

In conclusion, Manca suggests future studies could explore how scholarly communication is changing across different geographical areas and use cross-citation bibliometric maps to highlight research contributions from separate academic fields. The paper suggests that further investigation into the platforms as networked socio-technical microsystems could contribute to the advancement of knowledge about the potential and challenges of these sites in the open science landscape.

It is worth reflecting that five years since publication, these sites are still an under-exploited site of research in themselves and that this knowledge gap is still there, particularly in non-English language literature.

5. *Allcoat & Von Mühlennen (2018). Learning in virtual reality: Effects on performance, emotion and engagement*

This much-downloaded and cited UK study by Allcoat and Muhlenen explores the value of immersive learning when creating educational applications in virtual reality (VR). They do this by comparing student learning before and after an educational intervention in three scenarios: students using a VR headset, students viewing a video and students learning from a textbook. One novelty of the study was to go beyond measuring learning by expanding also to measuring students' emotion and engagement before and after the learning episode.

Ninety-nine psychology students learnt the same topic within an allocated 7 min, and then were randomly assigned to three groups. The first group studied these with a fully interactive 3D model of a plant cell using their headset (VR group). The second group learnt about the plant cell via a 2D video recording presented on a computer screen (video group). The third group learnt about the plant cell via a textbook with text and screenshots of the 3D model from an on-screen PDF file (textbook group). Each student completed three pre- and post-tests, including a knowledge of learning test of 17 biology questions, a differential emotions scale to measure their emotion, and an engagement scale. The difference between the pre- and post-test in the learning scale was referred to as performance, which examined different levels of Bloom's taxonomy, whether students performed better when it came to remembering or understanding.

Findings showed that the students' performance in the VR group scored significantly higher than the textbook group, and the textbook group's performance was significantly higher than the video group. In terms of Bloom's taxonomy, findings showed that the VR group's performance was better at *remembering* than those in the video and traditional textbook groups, and participants in the VR and textbook group were better at *understanding* than those in the video group. Overall, the study found that immersive learning can yield a positive impact on learning, as well as positive effects on emotion and engagement. The authors did pose the question: are better learning performance attributable to the 3D immersion, or to adopting active learning strategies in the virtual environment?

Even at the time of writing (August 2023), this article has been the 'most read' on the *RLT* website, signalling steady interest in this field, which is also signalled by dedicated journals to mixed reality, such as *Computers and Education: X Reality*.

It is unclear whether readers are engaging with the study because they intend to utilise the outcomes of this research in their practice, are looking for evidence to make the case for embarking on immersive learning, or for methodological interest, that is seeking strategies to evaluate learning in the emerging field of VR. The study itself is designed within a scientific, quantitative orientation, using control groups and a pre- and post-test measurement of a short learning episode on a low-level of Bloom taxonomy (memory and understanding). The question is, as we expand our knowledge in this emerging field, will this kind of methodology stand up to measured learning at higher-level Bloom and within longer, more complex episodes? How may we, as a community, advance not just our knowledge of the field but a methodological repertoire that responds to these developments?

6. Tanis (2020). *The seven principles of online learning: Feedback from faculty and alumni on its importance for teaching and learning*

This paper was submitted in 2019 and published in 2020, and is an evaluation of the success of the design of a master's degree programme based on feedback received from faculty and alumni. The master's degree programme that is the focus of this study was created in 2012, based on the *Seven Principles of Good Practice* (Chickering & Ehrmann 1996), suggested by Tanis to be best practice in online teaching and design. These seven principles are:

1. faculty–student communication and collaboration;
2. student–student communication and collaboration;
3. active learning techniques;
4. prompt feedback;
5. appropriate time for tasks;
6. high performance expectations;
7. respect for diverse learning styles (reframed by the author as ‘preferences’).

Tanis reports on the research method and findings, gives a detailed analysis of each research theme and correlates each with the seven principles. The most important principle, according to the results, is (6) high performance expectations, with positive factors being clear expectations (due dates and rubrics) and negative factors being a lack of clarity or inability to contact a member of teaching staff. The overall message for educators wishing to design online courses is that students prefer engagement with staff members rather than with their peers or with class content, and that in order for online courses to be a success, online teachers need to have a consistent presence in the online environment, and to be organised in their approach to teaching and communication.

Some of the methodological limitations of this research study are acknowledged by Tanis: both the small sample size of the teaching staff and the homogeneity of the student cohort. Another limitation, not mentioned by Tanis, is the small sample size of alumni and thus student respondents. As such, care should be taken with regard to generalisation of the findings to other contexts. However, the research design is clearly set out and the survey questions provided, so this study is, in principle, replicable.

One might also question whether the framework used in order to design this programme was, in fact, best practice in online teaching, and if it was, whether this has been superseded by more recent models such as the ABC Learning Design

(ABC-LD 2023) based on Laurillard's work (2007). Indeed, an interesting research question would be, and a way to take this research forwards, would be to evaluate Chickering and Ehrmann's framework by comparing it with more recent approaches.

7. Parrella et al. (2021). *Measuring the correlation between digital media usage and students' perceived writing ability: Are they related?*

Parrella et al. (2021) examine the extent to which the use of text messaging and social media influences students' media writing self-perceptions (MWSP). As we enter an age where generative AI systems might be doing more and more writing (or at least supporting humans in the process) it is useful for us to reflect, through this article, the way in which writing for text messaging or social media may or may not have an impact on any perceived benefit for more professional writing. Despite only being a few years old, this article feels very dated in the context of how text messaging and social media have diversified significantly in terms of being a means of communication, with the rapid expansion of short form video based platforms such as TikTok and Instagram Reels. However, the written word is still the pervasive form of content in higher education (assessment) experiences and so this paper still has relevance today, in so far as it examines the student use of writing across formats and seeks to understand the relationship between them.

In summary, the authors found a positive, albeit weak, correlation between students' time spent text messaging and their MWSP, which suggests that when students are text messaging or using social media, it then has a positive influence on their overall writing ability, including for formal purposes. Additionally, the use of text messaging and social media writing was identified as being a potential stress-reducing mechanism, which in turn might improve students' abilities to write more formally and was a recommended area for further study.

What was statistically significant was the correlation between the time spent using social media and the students' MWSP score, suggesting that writing for any format benefits students' overall confidence and perception of ability, although another recommendation from the article was that any support or development from writing tutors should 'discuss how writing for social media differs from professional writing' (p. 11) so as to ensure appropriate use of language, grammar and structure. Despite not all of the research questions being fully answered, the approaches taken should be considered for further studies. For example, the recommendation for the use of the MWSP scale to gather data in other contexts could now be applied to understanding the extent to which students' MWSP might now be influenced by the use of text generative AI tools like ChatGPT.

No doubt over the next few months we will see a flurry of AI related submissions come through RLT and perhaps even an article which seeks to understand the extent to which using text based generative AI tools can also have a positive influence on students' academic writing abilities (or self-perceptions of).

8. Lawrence & Fakuade (2021). *Parental involvement, learning participation and online learning commitment of adolescent learners during the COVID-19 lockdown*

This paper is about the response to the pandemic from adolescent learners in Nigeria. It focuses on two areas, firstly parental support offered by low and middle income

families and secondly how adolescent learners responded to this change in learning. The paper offers a definition of online learning taken from Gilbert (2015) and the US Department of Education (2010).

The paper starts by scoping some benefits of online learning found in the literature, including promoting cognitive development of learners, promoting higher order thinking and collaboration. The paper also puts forward that online learning limits collaboration, which clashes with the abundance of literature discussing collaboration in online learning, such that there appears to be limitations to the literature reviewed in the paper. The benefits for learning during the pandemic are stated, that is provision of continuity and access. The context of sub-Saharan Africa is also identified as having particular issues relating to internet availability, unreliable power supply, and a lack of suitably trained teachers. These issues are heightened in rural parts of Africa.

Theoretical framing draws on notions of participation from Wenger (1998) and says participation is not a numerical concept, but rather taking part in education. What this means in practice is not explored. The authors apply engagement theory (Kearsley & Shneiderman 1998) that focuses on being in an active state 'which entails affective, behavioural and cognitive commitment to technological tasks' (p. 6). Their hypothesis is that technology is inherently motivating.

The survey method adopted was a Google form, completed by over 1400 young people, aged 12–20. The sampling method and distribution were not discussed. Findings showed participants to be using a range of tools such as WhatsApp, Schoology, YouTube and Facebook; however, the details of how they were used was not mentioned. The data were analysed descriptively and using ANOVA to examine the respondents' attitudes to the relationship between parental involvement and online learning.

The findings discuss the positive response of adolescents to online learning, which they attribute to them being 'digital natives'. There is no comment on the unique context for the study, which means that this form of learning was the only offer, so the findings are likely to be skewed. They support their discussion with literature on the benefits of online learning for promoting learners' academic success, socio-personal and cognitive development, which they attribute to the intrinsic motivational impact of using technology for learning.

The article's main strengths are its focus on:

1. a significant issue, that is the pivot to online learning in the pandemic, and reporting on the early response;
2. adolescents rather than the more researched area of higher education;
3. Nigeria with its significant issues of access.

The limitations of the paper are that it adopts an uncritical perspective on the unique event of the pandemic. It also adopts a technologically deterministic approach in terms of seeing technology use as inherently motivating for young learners. The ways that technology is employed to support learning are not considered and, given the scale of the sample, it seems likely that there was some considerable variation in this. Finally, the technological deterministic framing of the study is evident in the way that young people are described as 'digital addicts' (p. 12) without considering the range of skills needed to learn with technology.

9. Humphries & Clark (2021). An examination of student preference for traditional didactic or chunking teaching strategies in an online learning environment

Humphries and Clark (2021), in a paper set in the Australian higher education sector, undertake a comparison of the viewing figures for video footage of lectures published as a whole, with the same lecture cut into smaller units, a process they call chunking. Their sample group comprised first year undergraduate students. They found the viewing rates for the shorter videos were significantly higher than the viewing figures for the whole lecture: the unique, cumulative and percent ratings for viewings were all greater. More significantly, the students who had watched the videos in individual segments went on to gain higher levels of attainment. The authors note: 'A surprising three-quarters of the student cohort elected to uniquely and cumulatively access the chunk-style lectures in preference to the long-view didactic form of the same material' (p.6). Students' preferences when it came to lecture consumption online were starkly apparent, implicitly challenging the traditional, face-to-face mode of delivery and its transferability to the online environment.

The article is significant because it brings questions of student-centred learning design to the forefront. There can be a temptation for faculty and support staff to factor out the deterministic effect of the medium when questions of transferring learning materials from face-to-face to online contexts arise. Content can be relocated from the face to face to the digital with technical ease and thus it happens, not because of a pedagogical strategy but because of convenience, or in the mistaken belief that technology comprises panacea. PowerPoint slides can simply be placed in a virtual learning environment, or a lecture can be recorded and deposited online. However, students, the article argues, respond better to the material when the mode of learning is acknowledged as a significant determinant of the type and effectiveness of learning that takes place. When proper, thoughtful design is enacted, learning improves.

Discussion and conclusion

RLT has an exploratory interest in constructing and evaluating frameworks for a mode of learning which remains, in historical terms, very recent. In this sense, *RLT* is the 'canary in the coalmine', engaging with new technologies and practices, evaluating them for their learning and teaching value but also for their value in the wider educational community, too, building amity and enhancing knowledge and understanding. Papers reviewed in this overview indicate a search for efficacy, for what works when technology is brought to learning. Specific papers explore technology enhanced learning interventions in education. They return to the strategic question of how technology enhanced learning can be enacted effectively.

Papers in this sample show that technical skills are not an *a priori* necessity for engaging with technology enhanced learning (Kauffman 2015). Effective learning design is more important (a point acknowledged in the first ever issue of the Journal), presupposing some knowledge of educational theory and pedagogy, creating user-friendly goods and services. Technology can enhance learning but not because it is technology, though Lawrence and Fakuade (2021) argue for technology as inherently motivating. Technology works in the context of effective learning design (Allcoat & Von Mühlennen 2018; Humphries & Clark, 2021). Moreover, students can, and even should, be partners in learning design (Kearney *et al.* 2012).

Articles in *RLT* show technology is not a panacea. Technologies need to be engaged with, critiqued and evaluated. They acquire value as and when people use them. In some of the articles summarised here, contentious terms, such as digital natives (Prensky 2001), whether applied explicitly or implicitly, continue to be used. However, *RLT* shows, and our fields of practice show, that it is not a question of learning technologies being produced by one party and consumed by another. Technologies for learning do not comprise goods and services in the orthodox, commercial sense of the term. Technologies for learning acquire value through usage. Too often, technology can be seen as an add-on to a pre-existing state of learning. How useful is it to continue to evaluate technology enhanced learning in comparative terms, relative to face-to-face, given its embeddedness in educational provision? With learning online now embedded, and consolidated in the pandemic, we may query whether ongoing comparisons of this kind will continue to have substantial use value. Technology enhanced learning should acclaim its distinctiveness, not its equivalence. A more integrated approach is possible and more theory-driven approaches are possible. That said, and despite the affordances of mobile learning and open education resources, a lot of formal learning still takes place at bricks and mortar institutions, and students can express a legitimate preference for learning, traditionally, from academics in preference to learning with their peers (Tanis 2020).

RLT nurtures its own and proximate communities of practice and it supports scholars and practitioners in their work. The articles surveyed in this paper show what good research in technology enhanced learning can look like but they also contain lessons to be learned: as a journal, we can aim to be more visibly international over the next generation, embracing equality, diversity and inclusion as a strategy for enhancing the journal's intrinsic quality and its extrinsic use value and relevance.

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