Mind the (Digital) Gap!: Exploiting the Educational Potential that Social Media offers Teachers in Bridgingtheir Learners' Skills and Knowledge in Creating a Just And Sustainable World

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Abstract

The key focus of this paper revolves around the dual concepts of teachers acting as 'digital intermediaries' for students, pupils or marginalised persons and their 'designing' role in developing, maintaining and celebrating the creation of ideas, collaborative interactions and dissemination in the form of information as a sustainable commodity. The use of social (and digital) media becomes the 'alternative' collaborative tool that allows participants to engage in innovative learning environments, existing both inside and outside of the classroom. In using the platform of social media as a social innovation tool the project provided educators with the relevant knowledge, skills, values and capabilities required in facilitating a meaningful curriculum for the development of citizenship (in this case European) and sustainability in terms of a knowledge sharing community. The basis of this paper surrounds the intentions, implementations and outcomes of the EU-funded Comenius project 'Learn to Teach by Social Web' (L2T – www.learn2teach.eu) which set out to exploit the educational potential that social media offers teachers in engaging their learners in the contextual development of skills and knowledge through an 'alternative' or unfamiliar learning paradigm. The project outcome is a self-study curriculum for teachers who would like to use social media in their classroom lectures.

Keywords: digital divide, social media, social innovation, communities of inquiry, sustainable learning environment, collaborative environment; empowering learners

Prerequisite: recognising the gap that exists

This paper and the ideas that brought about the construction of the 'Learn2Teach by Social Web' curriculum are not distracted by the incredible growth of social media around the world. Even though it is estimated that over 2.44 billion people will have social media accounts by 2018, doubling that of 2011, at a measly 1.44 billion world-wide (cf statista.com, 2015), we are only too aware that this represents a paradigm of particular populations and generic uses of the media itself. It is often easy to forget the vast number of individuals who do not, will not and cannot engage in the use of social media. So called 'usage gaps' may be traced along features such as disability (cf Bühler and Pelka, 2014), access to the labour market (cf Kaletka et al., 2012) or age; the biggest differences in access to social media are seen between so called 'developed' and 'underdeveloped' countries. Many, especially those in the developed western world, are carried away with the concept of social media and the promise that this brings in growing their network of friends, following celebrity in infinite detail and acquainting themselves with the memes of modern society. We recognised[1] that there were inherent flaws within social media, issues that could not be ignored, but many that could not be surpassed. The aim of this paper is to consider how teachers could repurpose social media rather than to dismiss it completely.

It is important at this time then, to note that there is an element of Bourdieu's 'misrecognition' (James, 2011). This is to suggest that we recognise, firstly that many people do not engage in the use of social media, or as we outline shortly, in the use of the internet altogether, and secondly, that social media is often avoided in educational settings, often seen as a disruptive element of the modern age. Misrecognition allows us to acknowledge that these issues exist, but our focus remains positive in the use of social media to create collaborative learning environments, despite this knowledge.

Our key focus is to identify the idea of using social media as a means of using information as a sustainable commodity.

In developing this idea and the concept of creating a curriculum for teachers, by teachers, we were only too aware that a gap existed within education as much as it did in the outside world. This gap would require the development of a new set of skills within teachers, many of whom would not wish to engage in the use of social media within the teaching and learning environment. From this point we develop

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[1] At this point the authors want to thank the project's critical friend, Emeritus Professor Frank Coffield, who draw our attention to the 'black side of social media'.

the idea of building teachers into the go-between, joining social media with education, linking teaching with learning with the teacher as an intermediary.

Rationale: the digital divide and the role of intermediaries

18% of the EU population aged 16-74 have never used the internet (cf Eurostat, 2015). This means large groups of adult citizens are excluded from services such as education, eHealth, wide parts of the labour market and eGovernment. There remains a digital divide within society that is threatening cohesion within modern civilizations, where we see a constant shift that takes more and more services and discourses to online spaces (specifically via social media that supports dialogue rather than simple information transfer) and, with this shift, away from those people who are not online. The threat is twofold: firstly, 'offliners' tend to be excluded from societal services and discourses which are shifted to digital channels; secondly, those new digital spaces tend to grow in certain areas of society with a specific cultural capital attached (meaning that there is often a low participation rate of elderly, poorly educated or unemployed individuals) – with effects on the design of those digital spaces that continuously replace or amend societal procedures.

A national comparison shows that the percentage of 'offliners' is not a universal standard. In some countries (Iceland, Denmark, Netherlands, UK, Finland, Sweden or Norway) only 1-8% of adults have never used the internet. In other countries (such as Italy, Greece and Romania), more than 30% of the adult population have never used the internet (cf Eurostat, 2015). A key means to suture this 'digital gap' seems to be the support of digitally excluded groups by professional digital intermediaries – like teachers, trainers or facilitators (cf Rissola and Diaz, 2010; Rissola and Centeno, 2010; Rissola and Garrido, 2013; Pelka and Rissola, 2015). Millard (2006) documented for the first time the importance of intermediaries in eGovernment, i.e. actors who mediate between a public service and the intended end-user. Data from the 2006 study show that 53% of users of eGovernment do so for their own purpose, 51% as part of their job, and 42% on behalf of family or friends, the latter thus being termed 'social intermediaries'. Moreover, each social intermediary on average assists 2.6 other individuals who are not themselves direct eGovernment users, thereby dramatically extending the actual impact of eGovernment. Intermediaries with digital skills and a good access to specific target groups seem to be a strong instrument to tackle digital exclusion.

The discourse on the 'digital divide' has in the past decade agreed that the threat of losing social cohesion reaches further than simply providing access to ICT: the challenge is to provide adequate digital skills. On the backdrop of this understanding our focus turns to schools – as they bring together students, skilled intermediaries (teachers) and the correct methods and equipment to develop digital cohesion. We would argue that the teacher as facilitator is the ideal person to

empower learners in meaningful competence-based use of social media promoting a just and sustainable world.

Practice: can teachers be intermediaries for digital skills?

The digital divide clearly shows a 'generation gap': While children and young adults do show a high internet usage (e.g. at school), the elderly fall back. But applying the 'skills perspective' on this phenomenon, one could scrutinize the pure access rates of young people to the internet and ask what are they doing and how competently are they interacting and behaving when online? This question was the starting point for the development of a vocational training curriculum for teachers whose objective is to develop digital media (teaching) skills to teachers. The curriculum development was funded by the EU Commission with a Comenius Grant in the form of the project 'learn to teach by social web' (L2T, www.learn2teach.eu). Initial research from the project showed that Europe's teachers are aware of the need for developing digital skills and the need to apply digital technology in classroom teaching. However, it also showed that a majority of teachers are afraid of using digital technology in their lessons or build their methodology around them. The reasons offered seemed to round on a lack of competences and confidence on the side of the teachers, with only a small percentage of more than 250 surveyed teachers indicating a lack of hardware; hence, the physical presence of equipment was not a barrier, but likewise its presence was not a catalyst for action. A special challenge seems to lie in social media applications: while students are using social network sites like Facebook to a large extent, teachers indicated a discomfort in using this kind of technology in a classroom setting.

A closer look at social media, however, reveals massive pedagogical potentials. They can be regarded as digital learning spaces that enable constructivist oriented learning (cf Pelka and Mitchell, 2014). Social media platforms build on the users to actively create content and begin relationships: 'These technologies do not create the transformations in society by themselves; they are designed and implemented by people in their social, economic, and technological contexts.' (Mansell and When, 1998, p.12, cited in Servaes and Carpentier).

Social media offers at the same time the advantages of:

- distance learning arrangements (free decision on time and place of learning, conservation of travel),
- electronic learning (multimedia applications, hyper-textualisation, communication, storage of large data volumes, archiving, connection to knowledge management), and,

- constructivist-inspired user-driven content production and communication (action learning, active learning, learner-to-learner interaction, learning by teaching, exploring learning).

These are, we believe, essential in developing a sustainable and engaging environment for learning and development to take place. The collaboration of people and their ideas, of shared experiences and new learning ensures that all learners become knowledge producers and part of the information society, thus promoting an enduring environment for learning growth.

Furthermore, although we ask the question 'can teachers be intermediaries for digital skills?' we should perhaps be framing this as the statement 'teachers must be intermediaries for digital skills'. The pressures that are present in modern education across Europe deem it necessary for teachers to become the agents of change, to create environments that make success more likely. We must reduce costs while improving quality, increase numbers while decreasing in size, moving from the factory production approach of one size of education fits all, into a world where students experience a unique, individual, personalised style of learning.

In the UK, as far back as 2003 the then Labour government's consultation document 'Towards a Unified E-Learning Strategy' stated that e-learning had the potential to revolutionize the way that we taught and learnt. They suggested it had the capacity of raising standards, improving quality, removing barriers to learning, widen participation and assure full potential was reached. With all this came the added bonus (to governments at least) that it would also reduce costs.

Jump forward to 2015 and a report by the British Educational Suppliers Association (BESA), which suggests that state funded schools will spend around £623 million on ICT in 2015 alone. Whether the ideas of reducing costs have come to fruition is perhaps not clear in today's economic climate, but whether this investment has proven successful has been measured, and the result is not what one would expect. A 2015 research report by the OECD has found that technology does not seem to have had any impact on either bridging the skills divide between advantaged and disadvantaged students, nor it seems any positive impact at all, at least compared with countries where investment in ICT is greatly reduced.

What then does this suggest for the role of teacher as intermediary? Certainly the debate on whether technology should have a place in the modern classroom has shifted towards that of discussing how it can be 'integrated into lessons to achieve specific learning goals' (Collins and Higgins, 2013). In answering this debate, however, there lies a paradigmatic choice; what stays and what goes? Across practically all teaching provision tutors will often argue that there is already too

much to deliver in too small a timeframe with too few resources – so where do we place the technology?

In a recent article detailing a similar curriculum for developing digital literacies in Australian trainee teachers, Jansen and van der Merwe (2015) suggest that we are required to 'guard against a reductive or mechanistic approach' in assessing digital literacy within teaching practice students (2015, p.191) and rather support the development of competencies within trainee teachers as they develop an 'informed digital participation' (2015, p.197).

It is this 'informed digital participation' that Learn2Teach by Social Web aims to enhance, and through the approach of developing a curriculum for teachers, by teachers, it is hoped that teachers of all levels and experiences are able to act as a transitional aid for their learners in an ever evolving digital landscape to participate more actively and more purposefully due to the guidance of their teacher as intermediary.

Consideration: information as a sustainable commodity

It might be agreed that a vast amount of the World Wide Web is made up of pages in the guise of a repository of information, with millions of pages, often existing in isolation from one another, seldom seen, rarely read. If we consider this as the makings of an information society, where the 1:9:90 ratio – active editors, reactive correctors and passive readers (cf McConnell and Huba, 2006) – still exists, it is clear that this does not operate effectively as a sustainable entity (cf Spangenberg, 2005). Essentially, for information to be useful, and in the context of the internet, for it to be sustainable, information requires context, and context is given by the knowledge possessed within the audience. Without the correct context, information might be missed, misused or misappropriated.

The focus of the L2T project was not based on the technology presented by social media and Web 2.0 itself but rather the engagement with the technology. In this project we did not consider the technology to be a driver for change but rather, as Servaes and Carpentier suggest, 'as tools which may provide a new potential for combining the information embedded in ICT systems with the creative potential and knowledge embodied in people' (2006, p.5). We explain our understanding of social media as a learning environment, a space. This space is shared with others as a communal collaborative environment, and we understand this sharing as learning. This space provides users, both teachers and, through facilitation, the students themselves, with the support required to participate in the collaborative activity of developing effective teaching and learning environments, and thus developing a fairer learning experience for all.

If we reconsider the discussion above regarding our 'information society' from the perspective of how we interact with technology, how we use it to collaborate and share ideas, then perhaps we might consider that there are ways of making this a 'sustainable information society', where we make use of both technology and knowledge in 'fostering a good life for all human beings of current and future generations' (Fuchs, 2008, p.291).

The concept of making ideas sustainable ensures that neither time nor resource is wasted in the creation of an approach, an activity or a concept. Although time and resource might be spent adapting approaches to the specific need of the group or topic, the majority of work and therefore effort has been carried out already. Much of the internet is set out using this approach; often, however, this is produced by experts, or at least a Vygotskian-styled More Knowledgeable Other in their field. We appreciate that there is often little wrong with this approach; however, the difference we set out to achieve in the L2T project was that the ideas and activities presented have been researched, practiced, adapted and produced *by* practicing teachers, *for* practicing teachers.

Curriculum: the l2t project

Sustainable information societies will have to find answers to a range of questions, if they want their schools to be places where young citizens are prepared for the use of innovative technology in a productive way. The project 'Learn to teach by social web' (L2T, www.learn2teach.eu) aimed to train teachers to empower their students to use social media for learning, communication, working and political participation. It developed a curriculum with over 100 hours workload to empower teachers to use social media in the classroom with the twofold aim of providing ICT skills to teachers and students alike. With the participation of eleven partners from eight countries, including six schools we started on the assumptions that:

1. teachers are ideal intermediaries for digital skills for the target groups of children and young adults;
2. schools set a good framework for accessing hardware and employing tested pedagogical settings and;
3. social media offers a multiple of pedagogical potentials; many of them linked to a constructivist understanding of learning.

The L2T curriculum was built on a media-wiki structure, allowing for multiple contributors, including project partners, trainee teachers and other interested parties, to add content on a range of social/digital media ideas for developing skills in teachers and students alike. This was essentially for teachers, by teachers, a theme that developed throughout the curriculum.

The curriculum was split into sections helping to guide the audience around a wealth of informative and directed topics. The curriculum outlined key elements relating to changes that social media has offered to society as a whole and to education and learning more specifically. This first section, entitled 'Pedagogics', focuses on changes in teaching approach, online etiquette (or netiquette), personal security and wider implications of social media interaction within society. The final section focuses on using social media in specific subject areas, using tried and tested approaches from across the schools within the partnership. This, once more, pushed the idea of content created by teachers, for teachers.

Each article within the curriculum is created in five sections, all with the same headings and themes in order to make the reader's journey through the wiki as comfortable as possible, regardless of the author/s. The first four sections are What? - Why? - How? - Try?

- What? offers a brief overview of the articles content.
- Why? discusses why each issue might be important to the learners' development, or perhaps the science or theory behind some of the ideas.
- How? suggests ways that social media has been introduced to each topic area, often with real life examples given.
- Try? offers a selection of additional ideas, often at a basic level, for teachers to employ in developing their use of social media skills.
- The final section is Resources which offers links to relevant websites, articles and additional materials that may help the teacher's development.

The format and content of each article is developed to encourage critical thinking and reflection, allowing the reader to question their current beliefs and assumptions relating to knowledge, perspective and teaching approaches in the context of a range of subject areas.

This is perhaps best exemplified by the article 'What are social media?', in which the authors are able to present both a simple introduction to the concept of social media and also challenge the reader to embrace an alternative approach to key topics with their students, including discussion and research on democratic movements, the environment and critical voices within the social media world.

Further to this, articles are set to develop systemic thinking in the process of acknowledging the complexities of using social media and interaction with the wider world. Problems are presented for which answers are not yet clear and therefore invoke a discussion that seeks to discover links and synergies in an attempt to find solutions. This is illustrated in the article 'Classroom Management', where the constant issue of learner empowerment and control in a new learning space is considered, including the development of personalised learning

environments. In this section we discuss how we might contest the way in which our learners (and the wider community) engage in the way that people are now using technology to 'shape their own learning spaces, to form and join communities and to create, consume, remix, and share material''(Attwell, 2006, cited in McLoughlin and Lee, 2010).

Finally, in the article 'Working in Groups', we are able to see one of many examples within the curriculum that discuss and encourage the process of building partnerships. Using ideas linked to 'Communities of Inquiry', we discuss how, when working together, individuals are able to gain access to the knowledge that others possess, through the process of dialogue. This dialogue is key in developing sustainable information' as Coffield and Williamson state, 'dialogue is collective ... reciprocal ... supportive ... cumulative ... and purposeful" (2011, p.51), hence it provides both context and value to the sharing of information.

A further illustration building on partnerships is shown in the school subjects article 'Maths'. This offers an example of a community built (within project member Gloucestershire College), where students studying maths across a range of levels and qualifications were brought together via the use of Twitter, Educreations and Edmodo in order to share ideas, solutions and wider knowledge. This approach to group work promotes dialogue and negotiation, and helps to develop purposeful and supportive learning in a range of areas.

Personalisation: European citizenship

In addition to the many articles written within the curriculum, an unexpected outcome from the project was that of learner collaboration and unification across nationalities, and the relationships that have developed during and since its creation. This has occurred in a variety of ways, for example, through learners sharing experiences of using social media with other students online from across the participating countries; sharing examples of curriculum and school experiences; students and teachers co-operating in transnational projects on a range of topic areas; and latterly student exchanges between schools across the partnership, building long-lasting relationships.

No example of this learner collaboration from within the project is perhaps greater than the bringing together of fifty students from the six schools across the partnership, meeting in Bielefeld, Germany, to gather a range of collaborative ideas to be presented at CeBIT, the world's largest ICT fair in Hanover.[2] This event celebrates the effort that both teacher and student have applied in using social media

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[2] Presentation available at https://www.youtube.com/watch?v=N2b9KCGrHcU&feature=youtu.be

to develop new forms of learning, sustainable information communities and collaborative environments to consider and share a plethora of ideas.

In line with wider, more traditional concepts of sustainability, this project (by creating content by teachers, for teachers) has empowered individuals (both teachers and students alike) 'with information on the impacts of their daily choices and actions, while tapping into their creativity and determination to find workable and innovative solutions and alternatives' (UNESCO, 2014, p.22), providing innovative solutions in search of a more effective way of learning in an ever changing world.

References:

Bühler, C. and Pelka, B. (2014). 'Empowerment by Digital Media of People with Disabilities. Three levels of support.' In: K. Miesenberger, D. Fels, D. Archambault, P. Peňáz, and W. Zagler (eds), *Computers Helping People with Special Needs. 14th International Conference, ICCHP 2014, Paris, France, July 9-11, 2014, Proceedings, Part I*, pp. 17-24. Dordrecht: Springer, pp. 17-24.

Coffield, F. and Williamson, B. (2011). *From Exam Factories to Communities of Discovery: The Democratic Route.* London: Institute of Education.

Collins, K. and Higgins, S. (2013). 'If tech is the answer, what's the question?' *Times Educational Supplement* [online], 15 November. https://www.tes.com/article.aspx?storyCode=6374306

Eurostat (2015). *Individuals who have never used the internet.* http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tin00093&plugin=1

Fuchs, C. (2008). 'The implications of new information and communication technologies for sustainability.' *Environment, Development and Sustainability* 10, pp. 291–309.

James, D. (2011). 'Beginning with Bourdieu in educational research.' *British Educational Research Association on-line resource.* https://www.bera.ac.uk/researchers-resources/publications/beginning-with-bourdieu-in-educational-research

Jansen, C. and van der Merwe, P. (2015). 'Teaching Practice in the 21st Century: Emerging Trends, Challenges and Opportunities.' *Universal Journal of Educational Research* 3 (3), pp. 190-99.

Kaletka, C., Pelka, B., Diaz, A. and Rastrelli, M. (2012). 'eScouts: Intergenerational Learning in Blended Environments and Spaces (ILBES) for social inclusion.' In: European Distance and eLearning network (EDEN) (eds),

Book of Abstracts, *EDEN 2012 Annual Conference*, *6th-9th June*, p. 12. Porto: EDEN.

McConnell, B. and Huba, J. (2006). 'The 1% Rule: Charting citizen participation.' *Church of the Customer Blog*. http://web.archive.org/web/20100511081141/http://www.churchofthecustomer. com/blog/2006/05/charting_wiki_p.html

McLoughlin, C. and Lee, M.J.W. (2010). 'Personalised and self regulated learning in the Web 2.0 era: International exemplars of innovative pedagogy using social software.' *Australasian Journal of Educational Technology* 26 (1), pp. 28-43.

Millard, J. (2006). *Analysis of European target groups related to inclusive eGovernment. Final Report to the Inclusive e-Government unit.* http://ec.europa.eu/information_society/activities/ict_psp/documents/analysis_t arget_groups.pdf

Pelka, B. and Mitchell, S. (2014). 'The project "Learn to teach by Social Web": A Framework for Social Media based Learning in the Classroom.' In: P. Santos, J. Cook and Y. Mor (eds), *Bristol Ideas in Mobile Learning Symposium (BIIML 2014). Proceedings Vol. 1, BIIML.* http://figshare.com/articles/Proceedings_Vol1_BIIML/1047193

Pelka, B. and Rissola, G. (2015). 'eFacilitators: teaching digital skills for an inclusive Europe.' *The Digital Post*, 18 May. http://www.thedigitalpost.eu/2015/channel-digital-single-market/efacilitators-teaching-digital-skills-for-an-inclusive-europe

Rissola, G. and Centeno, C. (2010). 'Digital Literacy Workshop Report.' *Digital Competences for Social Inclusion Actors and Intermediaries*. http://ftp.jrc.es/EURdoc/JRC65355_TN.pdf

Rissola, G. and Diaz, A. (2010). *European VET Solution for e-Inclusion Facilitators: Multi-country context analysis. Executive summary.* http://www.efacilitator.eu/wordpress/wp-content/uploads/2012/02/Summary_WP4_VET4e-I_final_all_languages.pdf

Rissola, G. and Garrido, M. (2013). *Survey on eInclusion Actors in the EU27*. http://ftp.jrc.es/EURdoc/JRC84429.pdf

Servaes, J. and Carpentia, N. eds. (2006) *Towards a Sustainable Information Society.* Chicago: University of Chicago Press.

Spangenberg, J.H. (2005). 'Will the information society be sustainable? Towards criteria and indicators for a sustainable knowledge society.' *The International Journal of Innovation and Sustainable Development* 1 (1/2), pp.85-102.

Statista (2015). 'Statistics and facts about social networks.' *The Statistics Portal*.
http://www.statista.com/topics/1164/social-networks

UNESCO (2014). *Roadmap for Implementing the Global Action Programme on Education for Sustainable Development.* Paris: UNESCO.