An Evaluation of Google Plus Communities as an Active Learning Journal Alternative to Improve Learning Efficacy

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Abstract

Learning journals are a very beneficial learning tool for students across a range of disciplines. The requirement of frequent entries to a journal encourages students to start achieving the learning objectives from the first week of a module. The completed journal serves as a useful revision resource for students preparing for a final exam or even long after the module's completion. The downside to learning journals is that they are passive and the class as a whole does not benefit from the variety of opinions, articles and personal experiences logged in their classmates' journals. If the journal is only handed in at the end a semester, there is no room for feedback for the students on their entries until after the module has completed. In this paper, guidelines for the deployment of an active learning journal alternative, using Google Plus Communities, are presented. A literature review is also included for alternative case studies in using learning journals,

weblogs, and wikis for recording and encouraging student learning throughout a module.

1 Introduction and Motivation

The motivation for seeking an alternative for learning journals stems from a popular module currently being taught to undergraduate students. This module has grown in popularity in recent years and this academic year has over 120 registered students. The module currently requires students to maintain a learning journal throughout the semester, which has consistently received very positive feedback from the end of semester student surveys. Students are required to create one entry per lecture topic (with allowable dispensation for absences and missed entries of up to three without penalty). This learning journal is then submitted at the end of the semester and is worth 40% of the module. The downsides to the current approach from a teaching and learning perspective are:

- Students do not receive feedback on their entries until the grades are issued at the end of the semester.

- The class as a whole does not benefit from any discussion or engagement on each others entries.

- Intriguing new stories or articles discussed in one student's journal are not shared across the class.

- Despite numerous reminders, many students leave the journal until the end of the semester and lose the benefit of continuous learning.

- Due to the class size. the workload at the end of the semester for assessment of the learning journals is huge, with many students submitted 20+ page journals.

2 Literature Review

The provision of a choice of learning methods to students can be advantageous to a class as a whole, while suiting each individual's learning needs. "Pedagogy 2.0" attempts to bring together the ideas, individuals, communities and information networks through technology to enable dynamic communities of learning (McLoughlin and Lee, 2007).

2.1 Learning Journals

Learning journals require students to frequently, e.g., weekly, bi-weekly, record their opinions, personal experiences and reflections relevant to a given topic discussed as part of a module. These learning journal entries encourage students to engage in reflective learning through self-awareness, critical analysis, synthesis and evaluation (Thorpe, 2004). Learning journals employed in the teaching of science, engineering and mathematics may not initially seem suitable due to the foundation of knowledge based on axioms and demonstrable proof (Langer, 2002). However, Langer found that the use of learning journals in these fields promotes critical thinking and can provide an opportunity for expression and development of self-reflection.

2.2 Weblogs

Weblogs (blogs) are used across a wide range of topics on the Internet. Blogs facilitate authors (bloggers) of any content to post their articles online for others to read and comment on. This content can take the form of a personal diary, communication with others, task management, documentation of processes, reviewing or indeed a learning journal. Despite the topic, they generally share a number of common features, as outlined by Sim and Hew, 2010:

- Individual Ownership.

- Hyperlinked post structure.

- Updated displayed in reverse chronological order.

- Archival of postings.

Blogs are used across almost every discipline in higher education (Williams and Jacobs, 2004). They can be used for instructor content distribution or as a means of student assessment or critical reflection (Yang, 2009). Using blogs for a record of learning creates a publicly accessible record of the student's learning throughout a course of study. Making individual student's blogs accessible to a class can encourage student engagement and create a sense of community outside of the classroom, further enhanced by both student and teacher interaction via the blog (Halic, Lee, Paulus and Spence, 2010).

One issue that might become apparent in the sharing of student's content is the privacy concerns of the individual. However, the literature does not support this issue. In 2004, Armstrong et al. trialled a blog-based learning journal activity for a number of students from a range of Arts backgrounds (Armstrong, Berry and Lamshed, 2004). She found that the students' views on the blogs were "overwhelmingly positive" and that they found the blog enhanced their learning process. The students felt that their journalling on the blog was personal, yet had no problems with others being able to view their work.

The public nature of blogs may be viewed as a barrier to reflective learning as an individual may not fully or naturally express themselves in a public forum, however it has been shown that blogs offer comparable and additional benefits to predecessors such as learning journals, specifically designed for reflective engagement (Hall and Davison, 2007).

2.3   Wikis

Wikis offer an online space for collaborative authorship and writing. Using a wiki helps to build a community driven knowledge base on a number of topics. However, wikis do not offer a suitable means of individual assessment and as

a result, are more suited to the communal building and sharing of knowledge. Individual wikis could be used by students to record their learning, however wikis do not encourage active commenting or discussion on the topic and are more focused towards easily creating websites with linking and bibliographic references (Duffy and Bruns, 2006).

2.4 Google+ Communities

The gathering of students into communities can enable the creation of a collective intelligence or a "wisdom of crowds" Surowiecki and Silverman, 2007. This community can benefit from each other's contributions and discussion and the knowledge of the community can increase at a much faster speed than an individual attempting to learn on his own. G+ Communities can facilitate this community collective intelligence in an online, easy to access and use service.

Google+ Communities is built on the Google+ platform. A distinguishing characteristic of G+ communities is that each has a leader (such as a module lecturer) who specifies if the community is *public* or *private.* Public communities are visible to everyone while the contents of private communities are only shown to members (Brzozowski, Adams and Chi, 2015). In addition to posting comments, photos and links. Additional functions are chat, recorded or unrecorded multiple participant video-conferencing (Hangouts) and a drive where documents can be co-edited (Ackland and Swinney, 2015).

Google+ Communities are a natural vehicle for communities of practice, where a common goal is shared in addition to topical interest. These factors combined with the fact that many universities are turning to Google to provide their services make Google+ communities an attractive option compared to other platforms previously mentioned.

Google+ Communities provide more interaction and collaboration mechanisms than blogs. As blogs have been shown to provide additional benefits for reflective engagement compared to learning journals, it is argued that Google+ Communities provide even more. The contributions, comments
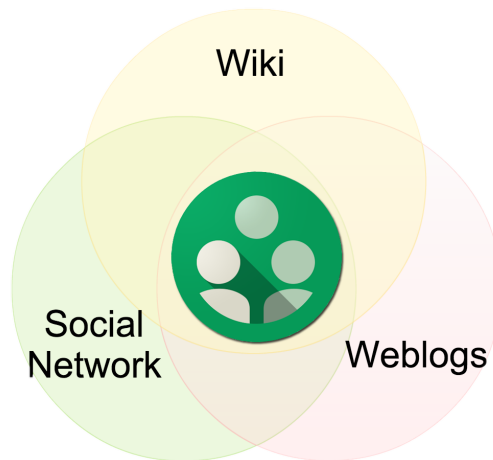
Figure 1: Combination of Functionalities Available through G+ Communities

and interactions provided by these additional mechanisms could enhance reflective learning in the Gibbs Reflective Cycle (Gibbs and Unit, 1988), and particularly that of Schön, 1983, where reflection-on-action (after the task) is emphasised along with reflection-in-action (during the task).

3   Methodology - Evaluating G+ Communities as an Active Learning Journal Alternative

"Google Plus Communities has provided a visually powerful way of framing the various groups of participants' interactions as a community of practice, and provides a tangible and simple way for lecturers to broker this concept to their students" (Cochrane, 2014).

G+ Communities facilitate the grouping of users into public or private online groups for the purposes of social networking, sharing content, discussion
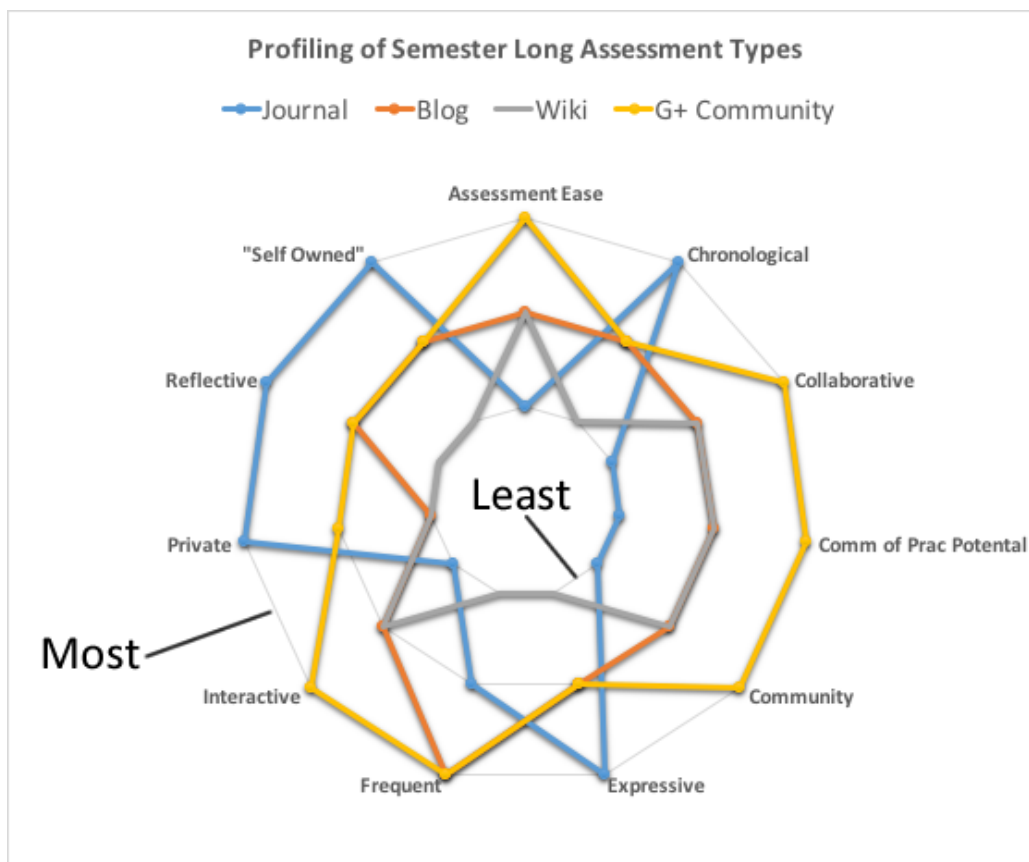
Figure 2: Profiling of Various Semester Long Assessment Types.

and commenting on a specific topic. The use of G+ Communities as an alternative to the traditional learning journal is more akin to a hybrid between using a wiki, a weblog and a social network, as portrayed in Figure 1. This hybrid approach can keep the benefits of each of the aforementioned Internet services, while focusing student effort and engagement on a single service.

Figure 2 shows a comparison of the characteristics of the various assessment types compared with G+ Communities. As portrayed, G+ Communities encourage a more collaborative, community driving learning experience in a familiar social media context for students. As a result of the social media aspect to G+ Communities, students will be encouraged to engage with the content more frequently and should find the overall process more interactive when compared with the alternatives.

3.1 Guidelines

Guidelines for the implementation of a G+ Community to encourage active learning are outlined below:

- The G+ Community must be setup as a private community. This is to ensure that third party G+ users do not interfere with the learning process.

- Students must be invited to join the community manually, although this is as simple and copying and pasting the class email list into G+.

- Categories must be created for students to post their weekly entries. This aids in the organisation of the community's focus.

- An admin category should be created for module coordinators and teaching assistants to post useful information and news articles discovered throughout the semester. This potentially encourages engagement on topics further than those discussed in class.

- The regular guidelines provided for what the learning journal entries should contain should be provided. These guidelines provided to students will likely be similar to those provided for an offline journal, with the addition of encouragement to link to online content, e.g., videos, academic articles, blog posts, etc.

3.2 Assessment

Assessing an online community as part of a module can quickly become a full-time job. Encouraging students to engage with the community will likely fall on deaf ears for many in the class if there is no GPA advantage to taking part. Measuring student engagement with the G+ community is made possible through two automated online tools, `CircleCount.com` and `AllMyPlus.net`. Figure 3 represents a sample of the statistics available from the service for your G+ community. The service reports on the interactions
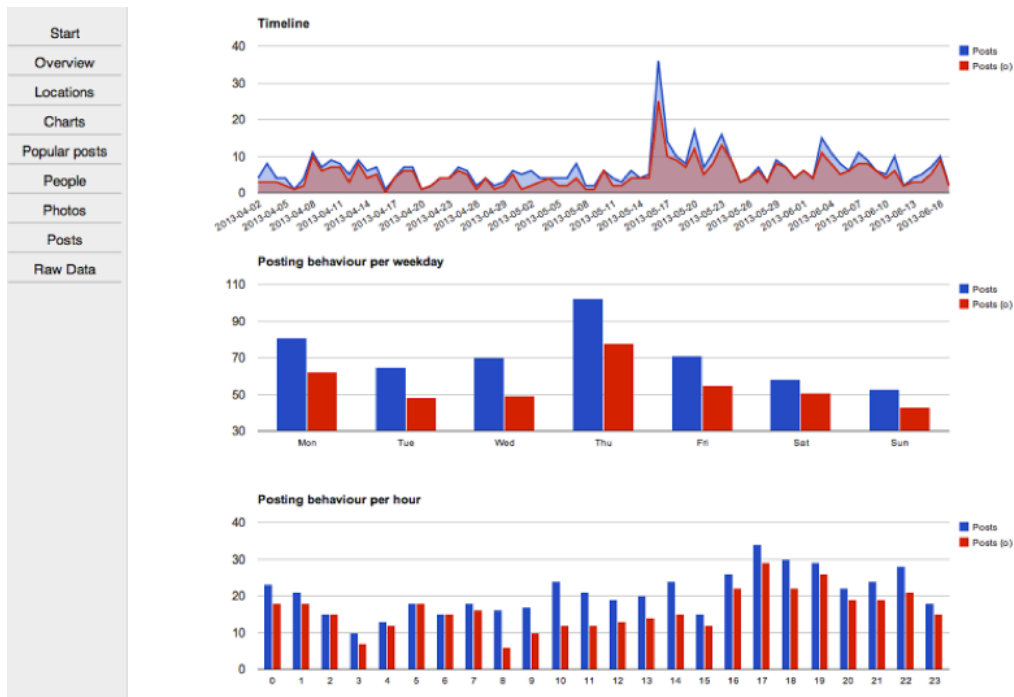
Figure 3: Statistics Available from `AllMyPlus.net` for Google Plus Communities

on a member by member basis including posts, "+1s", comments, links, videos, photos and polls created or answered.

However, relying on the reporting of a third party tool for assessment may not be a reliable option as the system might go offline, students may figure out how to dupe the system, its statistics may not be 100% accurate, etc. Instead, a reflective report on each student's contribution and learning from the G+ Community should be submitted towards the end of the semester. This report will give students the opportunity to reflect on their learning thought the semester and will hopefully show a benefit from the discussion of the weekly topics covered in lectures. The grade for the learning journal component of the module will consider both the community engagement and the reflective report.
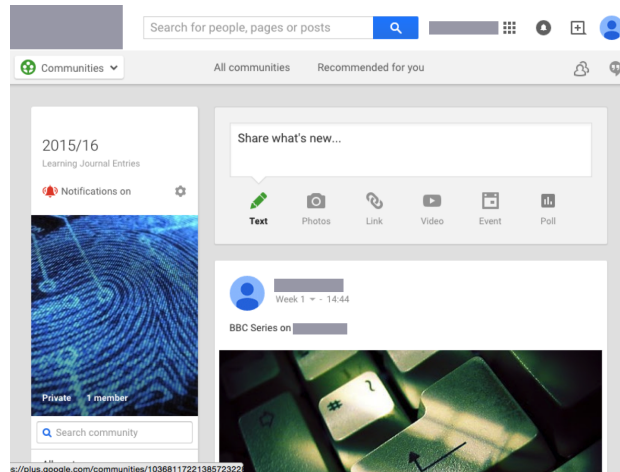
3.3 Example Implementation

Figure 4: Example Google Plus Community for aforementioned module [Identifying information redacted for anonymous review]

An example implementation has been created for the 2015/16 academic year for the module outlined in Section 1, as can be seen in Figure 4. Fortunately within UCD, each staff member and student automatically has a Google account, which is all that is required to access G+ Communities. For this implementation, weekly categories are created within the G+ community – into which students must organise their weekly entries. In 2015/16, it is intended that this G+ Community will run with the entire class in a single community. The benefits of this are that the best articles and entries will rise to the top of the list (with 'best' determined by the number of interactions each entry receives). Having the class in a single community may also have its drawbacks in terms of student's entries getting lost in the volume of activity in the community. This solution to this is to create multiple smaller communities, but this comes at the loss of discussions being visible to the entire class. Without trialling, it is difficult to say which approach might be best.

4 Conclusions and Future Work

Employing a G+ Community as an active learning journal alternative should prove beneficial for students and encourage class discussion and social learning. Each of the downsides presented in Section 1 are overcome through the use of a G+ community alongside a number of additional benefits including peer learning, social learning, ability to include multimedia content, ability to link to articles, etc. It is planned to roll out a trial of the service as an active learning journal in the upcoming delivery of the module outlined previously. From an assessment perspective, the aforementioned G+ Community automated statistical reporting tools can be used to measure student engagement and could influence the grades allocated for the learning journal alternative. There are a number of potential benefits for both the teacher and the learner in rolling out a G+ Community as an alternative, active learning journal, but the measurable benefits will depend on a large number of variables in an individual educational setting.

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