Affordances of Google Resources in EFL/SLA Classes

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Abstract
With every next year, people become more connected to each other and to our collective knowledge base and cultural environment. Use of collaborative technologies is necessary in the workplace and outside classroom walls. Higher education should focus not only on promoting knowledge acquisition, but also on helping students develop the skills necessary to engage with technologies they will need in their personal and professional lives. Making good use of collaborative and other technologies may help students, teachers and schools achieve those goals. This is a review of methods and practices of using Google resources in blended learning classes, based on research about and insights from the university EFL/SLA community. The benefits and drawbacks of those uses, as well as other potential affordances of Google resources for the language classroom are discussed. Due to space limitations, a focus is placed on methods and practices that can be implemented by one teacher, without a school–wide solution or school site administrator. For the purposes of this paper, an “equipped” classroom means one with an AV teacher podium, projector, Wi-Fi, and with students who have access to internet-capable devices. Google resources used for classroom management, collaborative writing, in-class and out-of-class speaking tasks, and privacy issues are explored.

Keywords: Google Drive, Google Docs, affordances, EFL, SLA, ESL, language classes, collaborative, writing, speaking
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The word *affordance*, coined by the psychologist James Gibson refers to a reciprocal relationship between an organism and a particular feature of its environment (Gibson 1979). An abstract definition of Gibson’s term is that “affordances consist in the opportunities for interaction that things in the environment possess relative to the sensorimotor capacities of the animal” (Varela, Thompson, and Rosch, 1991, p. 203). Van Lier (2000) gave a concrete example:

In the forest, a leaf can offer very different affordances to different organisms. It can offer crawling on for a tree frog, cutting for an ant, food for a caterpillar, shade for a spider, medicine for a shaman, and so on. In all cases, the leaf is the same: its properties do not change; it is just that different properties are perceived and acted upon by different organisms (p. 252).

van Lier goes on to explain how a pre-verbal 9-month-old child pointing to things while speaking or making eye contact with the parent is an affordance for language learning; using the gesture to prompt the parent to teach the word for the object. McLoughlin and Lee (2007) wrote that “blogging entails typing and editing posts, which are not affordances, but which enable the affordances of idea sharing and interaction.” (p.666). Alternatively, a student in a language class who shows an existing video in class as part of a presentation is using YouTube as a tool - or as a crutch, to avoid speaking - but a teacher who designs a how-to video-making and sharing project for an EFL/SLA class is using YouTube as an affordance of YouTube.

Google resources, particularly Google Drive is full of affordances for university language classes, some utilized, some known, and some yet to be discovered. It is important to note that
an affordance is not a feature but what can be done with a feature. The purpose of this paper is to survey unique and specific affordances of Google tools to maximize desired learning outcomes. An important clarification and distinction needs to be made between Google Drive, Google Apps for Education (GAFE) and Google Classroom. Google Classroom is a product in the suite of GAFE tools and can be thought of as an affordance of Google Drive which Google has customized for schools. GAFE is extremely popular and growing exponentially (See Appendix A), however the Classroom product is currently only available to schools who implement GAFE, and therefore requires a school policy shift and IT administrator support; it cannot be used by a teacher alone. This paper focuses on Google resources which can be utilized directly by EFL/SLA teachers and their classes.

Successful adoption of Google resources by teachers and students requires an equipped classroom and familiarity with various Google offerings. The Educause Center for Analysis and Research (ECAR) conducts an annual survey of university students and faculty worldwide about their IT experiences and expectations. Their 2015 report reveals that by and large, the IT infrastructure exists, as does the willingness of students and faculty to engage with it, provided there are effective and impactful ways to do so. Educause survey details and statistics are included in Appendix B.

Social Constructivism and Collaboration

Sociocultural theory is built on “the idea that learning is socially situated” and draws on Vygotsky’s (1978) idea of the zone of proximal development; for each individual, the difference between what she/he can do without help vs. with help from a teacher, other peers, or technological tools. Collaboration evokes the term “social constructivism” (Vygotsky 1978) meaning that “[s]ocial constructivists believe that we learn by social and communal activities”
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(Parker & Chao, 2007 p.59). McLoughlin and Lee (2007) coined the term Pedagogy 2.0 to help explain how we gain, construct and share knowledge through Web 2.0 and other resources: “Learning occurs as a socio-cultural system, within which many learners interact to create a collective activity, supported by technology affordances.” (p.667). According to McLoughlin and Lee, scaffolding is not limited to teachers and peers, but also includes virtual community sources and technology, and “wikis and collaborative writing and editing tools such as … Google Docs …are useful extensions to conventional writing approaches” (p. 671).

Parker and Chao (2007) showed that using collaborative technology promotes participation, engagement and enriches the learning process. “Collaborative practices are being increasingly advocated in second-language classrooms largely in response to the collaborative potential of Web 2.0 tools” (Kessler, Bikowski & Boggs, 2012). Language learners are, in this approach, seen as active participants in the meaning-making and problem-solving processes as they collaborate and co-construct.

Affordances, Benefits and Drawbacks

Google Drive is generally free, browser based, and allow students and teachers to create, share, collaborate and comment on a variety of professional-looking document types and media (including Google YouTube videos) anywhere, anytime, with any subset of teachers and students or with communities beyond classroom walls. There are many affordances of Google Drive that Can benefit any class (See Appendix C). Methods and practices of using Google Resources for EFL/SLA classes include collaborative writing, editing via suggestions and comments, promoting in-class speech, out-of-class speaking activities, and promoting learner autonomy.
General Benefits and Drawbacks

Firth and Mesureur (2010) demonstrate many practical applications (affordances) of Google Drive used in a university ESL program in Tokyo. All Google resources as Firth and Mesureur (2010) note are “available in a multilingual interface [which] is particularly useful for lower-level learners whose access to the software’s full potential is thus not hampered by their limited knowledge of the technical English used in menus and options.” (p.10). Firth and Mesureur also explain that “conversely, higher-level students can be challenged to use the full suite in English only.” (p.10). Denton (2012) writes that using a whiteboard creates a “transient record, perhaps diminishing students’ ability to reflect upon and summarize learning across multiple class sessions” (p.35). Especially in an EFL setting where note-taking can be slow, shared notes may be more beneficial, however more research needs to be done regarding performance improvement. Arrowsmith (2013) conducted a pilot study of using Google Docs with 291 international pre-Master’s degree students representing 13 nationalities at Birmingham University. Among the negative issues raised in Arrowsmith (2013), being tied to the computer made teachers “static” and affected “monitoring and even rapport building”, as the computer became a “physical barrier” (Arrowsmith p.170), although students in his study disagreed with these sentiments.

Denton 2012 also addressed monitoring student attention during cloud-based collaborative tasks. Citing Traxler 2010, “... it is important to establish policies and procedures for how students are expected to use their laptops, tablets, and smartphones during class” (p.36). It must be made clear that in-class cloud-based tasks are for learning and not entertainment. “...using phrases such as “lower the lid” (to your laptop) helps students move away from their screens to focus their attention elsewhere, such as on the instructor.” (p. 36). Another way to
overcome perceived inability to monitor students is by viewing the minute-by-minute revision history of Google Docs worked on in class, which allows a teacher to quickly identify lack of participation, student engagement and time spent on task. Other useful affordances of viewing file revision history will be discussed forthwith.

**Collaborative Writing**

Writing and writing instruction takes “continuous engagement with students throughout the entire process of planning, drafting, revising, editing, and distribution, as opposed to requiring students to submit a single final draft for feedback and evaluation” (Slavkov, 2015, p. 80). Slavkov adds that writing is a social act that doesn’t occur in a vacuum and illustrated a task whereby EFL/SLA students created a silly story; each student contributed a sentence using a word from the vocabulary being learned as the entire class watched the words appear on their own screens. A collaborative story created in this way “affords a level of simultaneous group engagement that traditional word-processing does not; furthermore, under the premises of sociocultural theory, such group tasks may promote learning through a high level of engagement with multiple peers” (Slavkov, 2015, p. 89). A similar affordance (which could be used as a warm-up activity) could be working in groups to put pre-written sentences containing target vocabulary in the correct order to form a coherent story. A potential concern with Slavkov’s activity is the intimidation of typing something as the class watches and waits. Writing that is less sequential (wikis, blogs brainstorm, etc.) may facilitate more student production in synchronous settings, and may mitigate the threat of onlookers.

Kessler and colleagues set out to study the collaborative writing of more than two non-native English speaking writers using a Google doc. (Citing Chisholm, 1990) Kessler et. al. 2012 mention failures of collaborative writing due to inexperience, interpersonal conflict, concerns of
fairness, and (citing Nelson & Murphy, 1993) include inaccurate peer edits as another potential source or failure. Taking these limitations into account, “a review of the literature reveals that collaborative writing in the second language (L2) writing classroom is advocated though underutilized” and that technology provides many benefits to the L2 collaborative writing process” (Kessler, Bikowski & Boggs, 2012 p. 93).

Questioning the benefits of collaboration for advanced language students, Strobl (2014) studied the collaborative Google Docs writing of 48 Dutch natives with advanced German writing proficiency. Writing research has shown that collaboration helps learn a second language and improve text quality, recent online collaborative writing studies have found “the positive effect of co-ownership and peer feedback on process and product” (Strobl, 2014, p.1).

Along with Paulus (1999), Strobl revealed a drawback to peer collaboration; mainly surface level, meaning-preserving changes are made; peer comments were about lower-order concerns and not style and content selection changes. However, while complexity, accuracy, and fluency were not better in the advanced students’ collaborative texts, appropriate content selection and organization was, which Strobl considers higher-order concerns. A concern was that students mentioned unequal division of workload, matching the style and pace of peers, and technical issues as negative aspects of collaborative writing (Strobl, 2014).

Liang (2010) studied 12 university sophomore English composition students at a major university in Taiwan engage in synchronous book review (collaboration) and research paper(peer-response) tasks in groups of four. Liang found that in both tasks, students discussed the content of their writing more than the meaning of the texts, in line with Strobl’s findings that students focus more on lower-order concerns in collaboration. An interesting finding was that students incorporated peer revisions more when the work was collaborative; they weren’t as
receptive when the revisions were suggested by a peer who hadn’t engaged in the initial writing. This could be explained by perceptions of ownership as they relate to sharing vs. collaborating and suggesting vs. editing (See Appendix D). Research by Chandler (2003) “has shown that students pay more attention to comments from teachers on their work when this feedback is received on draft papers than when the corrections are returned with the graded assessment.” (as cited in Firth & Mesureur, 2010, p.10). More research could substantiate whether comments on a draft are seen as purely support from the teacher vs. comments associated with and possibly justifying a mediocre grade.

Jones et al 2006’s (cited by Liang, 2010) research with first-year writing students suggests that stylistic and other issues were addressed face-to-face, but many of these studies differ regarding what was researched and how (comments, revision quality, proficiency, nature of task, etc.), raising questions about how to maximize learning, output quality, and students’ perceptions. Strobl’s findings (Strobl 2004) illuminate the need for teacher experience and planning when incorporating Google Doc-based writing, emphasizing the higher-order concerns and employing face-to-face (rather than online) pre-writing planning activities.

**Speaking**

Second language acquisition in a classroom setting involves the daunting task of speaking in class. For the student, self-consciousness is high for fear of mistakes in grammar and pronunciation, in front of an audience of student peers who judge and wait. Speaking practice is very important, but difficult to accomplish in an EFL class for many reasons including limited time and ability to hear and comment on student speech. Partner speaking exercises help students overcome confidence issues, but are hard for the teacher to monitor and evaluate.
Class discussions: Pre-discussion Brainstorm

Conducting whole class discussions traditionally involves the instructor asking open questions, with one student speaking at a time, while the instructor directs dialogue (Denton, 2012). An alternative method is to have students post answers or opinions about discussion topics simultaneously from their connected devices to the shared cloud document (Denton, 2012). Denton (2012) mentions that this is a nonverbal form of discussion, however the resulting document can serve as a jumping off point for the class to have a targeted discussion, with students elaborating on what they wrote and why. Through the file’s revision history, the instructor can see who authored each comment and is therefore able to call on students by name and ask them follow-up questions to expand on their ideas (See Appendix E).

Speaking Outside of Class

There is both a need and a benefit to having a means of autonomous speaking practice outside of class. Via YouTube, EFL/SLA teachers have found ways to increase speaking opportunities outside of limited class time, and reach beyond classroom walls. Hamilton (2010) reviewed a lesson plan using YouTube. Eighty undergraduates in a 1-week seminar at Meiji University in Tokyo first watched a how-to video on YouTube, and then gave a short presentation about it in class. Then in groups, they created their own YouTube how-to video as part of a blog. “The planning and execution of the video portion of the blog was by far the most interactive, engaging and communicatively relevant activity of the week” (Hamilton, 2010 p.29). Hamilton goes on to mention that the dialogue practice, desire to make a good impression on publicly available content, and self-appraisal resulting from being able to watch the video all produced significant motivation, and language production. Most students are very familiar with YouTube and can create and upload videos with their phones (Hamilton, 2010). Limiting them to
one computer per group allowed only one student at a time to control the mouse and keyboard, requiring other group members to communicate in the target language. Imposing computer use time limits and disallowing video editing further ensured that conversation and communication didn’t taper off and also put emphasis on planning the dialogue, forcing good cooperation and communication clearly in English. This seminar was a unique 1-week intensive lesson plan, but implemented as flipped classroom activity, with students doing the majority of the work outside of class and class time spent watching and commenting on the videos. Comments could also be made on the videos themselves to practice giving feedback without in-person real-time pressure.

Sun and Yang (2015) conducted a case study of 14 mostly third and fourth-year high-intermediate and advanced English-speaking undergraduates in Taiwan, engaging them in a service-learning project as a proposed solution to EFL/SLA students’ lack of an authentic English-speaking opportunities outside of conversation class time, and the anxiety of speaking English in class. Citing Goldberg et al. (2006), they explain service-learning is “experiential (real-life) and reflective problem-based learning in which students enrolled in an academic course provide a needed service to a community partner” (p. 131). It has gained attention as a language education tool as it provides real-world opportunities for learners to use the target language. The EFL speaking class students in the study made YouTube video presentations about university life, survival tips and the city, to help inform international student peers. The students uploaded their videos via campus Facebook groups for such peers. Sun and Yang claimed the project “enhanced EFL students’ public speaking-related skills (e.g., idea and content development, and pronunciation), built their confidence in speaking English, and allowed them to develop their own learning process and strategies” (p. 202). They found that the service-learning project and sharing was well received by EFL students. What remains unknown
is whether completing asynchronous video projects helps students improve live speaking skills like eye contact and gestures (Sun & Yang, 2015).

A weak point in this study regarded student privacy. A class-only Facebook group was established for students to share their YouTube videos, and this is where they commented on each other’s videos. While this group was private and accessible by classmates only, each student had to invite at least three international students on campus to view the videos and leave comments as well, allowing them to view the potentially negative language-related comments made about the video production. It might have been better to create yet another Facebook group for the international students to view the videos clean of private class comments.

Making videos is a very viable alternative to in-class role playing, and allows permanence saving face, dealing with absence and the ability for a teacher to evaluate and score speaking without pressures of catching everything in real time. On the other hand, the theatrical nature of live in-class role plays and performing memorized scripts in front of others have their merits. Using Voxopop and VoiceThread for their research, Pop, Tomuletiu and David (2011) hypothesized that use of technology-enhanced speaking tasks caters to more learning styles and that speaking “in a safe asynchronous environment” will increase interest and motivation and therefore lead to greater speech production and improvement. VoiceThread allows uploads of any kind of presentation or video and the ability to add video comments, comments from phone text, and audio file comments. Most or all of these features are provided by a combination of Google Drive and YouTube (a Google product). Strengths of digital EFL speaking platforms cited by students in their study included the ability to reedit and therefore improve, no response pressure of face-to-face communication, and that they were challenging, memorable, and created a feeling of ownership pride and independence (Pop, Tomuletiu & David, p. 1202). Students
mentioned the novelty of the platform as a weakness as well as the threat of no internet connection. However, they mentioned *more* issues with class speaking including uneven chances to speak (better students dominate), boredom, absence from class, forgetting what was learned, and loss of face to more proficient students.

**Privacy and Target Audiences Outside Classroom Walls**

Several methods and practices reviewed in this paper involved sharing content with people outside of the classroom; some written, some involving students’ names, voices and faces. This brings up issues of privacy, scrutiny of student work and how to choose audiences to promote learning gains. Speaking to a diverse audience of users worldwide (albeit asynchronous and perhaps audio-only) can be intimidating. In Sun and Yang (2015), most of the students were uneasy about being in a semi-public video with their real name. There is safety and privacy in uploading one’s work to a private folder that is shared exclusively between a student and his/her teacher. On the other hand, there is a more realistic nature to public class folders accessible by fellow classmates, and the challenge of creating something you can “put your name on.” Google Drive and YouTube have customizable privacy options and settings and will not be discussed here (See Appendix F). Participation in many web-based forums, while public, can be done with an alias and without teacher or classmate scrutiny, promoting learner autonomy. Moreover, the prospect of receiving comments and likes from strangers can be a motivator. There are unanswered questions about whether the public nature of tools like Voxopop, blogging tools, Prezi, or Lang-8.com (a language-exchange peer editing site) is beneficial in promoting language learning. According to Pop and Tomuletiu (2011):

Having an audience beyond the classroom walls can have significant benefits for adult EFL students such as enhanced motivation, extension of students’ talking time as well as
engagement in memorable learning experiences. Consequently, students developed more positive attitudes towards speaking and their confidence to speak in the EFL was significantly increased (p.1203).

Similarly, Chen and Brown (2012) concluded that writing that is done with a specific audience in mind may be of higher quality, as this awareness spurs the student to “acquire new vocabulary, and to focus on sentence precision and complexity” (p. 450). This may be the type of incentive or push that more shy/reclusive/introverted language learners need in order to become successful autonomous communicators in real-world settings. Chen and Brown also warn: “If the audience is perceived to be irrelevant or unimportant, students may not exhibit motivation to complete the task” (p. 451). Further studies are needed to confirm if fully-public environments improve results.

**Conclusion**

Conditions are ripe for more and better utilization of Google Drive (including docs, forms, slides, and sheets), YouTube and other Google apps in language education class management and curriculum. The infrastructure, interest, and know-how exist. Methods and practices including collaborative writing, in-class and out-of-class speaking activities and privacy issues have been reviewed. Most of the studies reviewed here have focused on students’ motivation or engagement, but have not researched if specific quantifiable learning gains like increased vocabulary result from affordances of Google resources. Also, further research is needed to determine if methods and practices that work for generic classes may also benefit EFL/SLA classes. While further affordances and potential are yet unknown, education research literature still needs to prove that these increasingly popular tools are fruitful for students.
References


**Appendix A**

**Google Apps for Education (GAFE) Popularity**
Google Apps for Education has 20 million users worldwide, 7 million of which are in the U.S, doubling over the last two years, and over 72 of the top 100 US universities use GAFE (Koetsier, 2013) and “Google Apps is growing quickly, if not virally, doubling over the last two years. And the current 20 million users include seven million inside the U.S. alone — led by Oregon that adopted Google Apps in all K-12 classrooms in 2010.” (retrieved from http://venturebeat.com/2013/05/18/schooled-by-google-how-google-apps-is-penetrating-education-infographic.

Appendix B

EduCause Research on Universities and IT
The EduCause Center for Analysis and Research (ECAR)’s 2015 report surveyed over 50,000 students from 161 institutions in 11 countries and 43 U.S. states about their IT experiences and expectations. Most said “they were prepared to use technology when they entered college” but that “technology hasn’t found a mainstream spot in teaching and learning.” Since 2013, students don’t feel any more connected to their institution, their instructors, or other students, even though technology continues to become more embedded in their lives. Over 90% had internet-capable devices, and over 60% had two such devices. 95% have a majority of classes Wi-Fi-equipped, and about a third had Wi-Fi throughout their campus, although unreliable. Interestingly, the number of students who get actively involved in technology courses decreased from 2012.

ECAR’s 2015 report obtained responses from 13,276 faculty members at 139 colleges and universities, confirming the findings from the 2014 ECAR study on the same topic of technology use among university faculty: Faculty like technology and want to use it in creative and innovative ways to enhance teaching practices and improve student learning outcomes, provided there is clear evidence of the impact of technologies on student learning and the practices associated with them. They wanted more training, support, and development to better understand how to use the technologies effectively. About three-fourths of faculty owned three or more types of technology typically used in higher education settings (e.g., laptops, tablets, smartphones) and had considerable experience teaching with it in digital learning environments. They have an online component in at least a few of their courses and think that their institution’s IT staff adequately supports in-school technology use.

Appendix C

Affordances of Google Drive for Generic Classes
Aside from the uses discussed in the paper, Google Drive can be used as a student work repository, as a means of facilitating class presentations, as a means of conducting student surveys and self-assessment (Google Forms), as a means of posting/distributing assignments or resources, as a chalkboard, and more. Teachers have expressed a multitude of mostly positive comments regarding the use of Google Drive in managing daily and quarterly or semesterly tasks. Firth and Mesureur (2010) discuss how faculty at Keisen University share lesson plans, assignments, information about topics covered, strategies, and individual student needs. Class rosters were also made available this way, for all teachers to access. Firth and Mesureur use Google Forms to collect course feedback on assignments and for anonymous teacher evaluations.

In an equipped classroom, a shared Google Doc with view-only privileges can act as a “chalkboard” or teacher space to show prepared or ad-hoc notes, including editing student work or writing quiz/test answers while students watch via projector or netbook. “Google docs also aided with repeat lessons...[we] found it easier to prepare for lessons...” and “[teacher] notes can be improved in class and post-class ...with students able to access the latest version” (Arrowsmith 2013, p.170). Dealing with absence was reported to be easier, as a student could be referred to the shared class notes or project files, without relying on a classmate. Clarity of board work was also mentioned as a plus (Arrowsmith 2013) with the caveat pointed out by some teachers that “students might be less inclined to take notes if they are guaranteed a permanent record on Google Drive.” (p. 168). Harley 2002 (cited by Arrowsmith) found that “note-taking actually had a negative effect on student performance.” (p.169). Less computer-literate teachers “struggled with the transition [to Google docs]” (p.169).

Appendix D

Ownership Perceptions: Collaboration and Suggestion
Blau and Caspi (2009) tested the relationship between psychological ownership, perceived learning and perceived quality of outcomes with 118 undergraduates at the Open University of Israel. They studied students’ perceptions after sharing vs. collaborating on documents with a partner, and making suggestions vs. editing a colleague’s document (and receiving mutual suggestions/edits made by this colleague/student). Students expressed positive feelings about collaboration in that “the quality of a revised document was seen as higher (p.53)” Students believed that collaboration improved their work quality, however students felt that “while they [themselves] did not exacerbate the document they read or edited, others worsen their document when ... editing it.” (p.53). They found that “[e]diting was considered to be intrusive: the Editing group had a significantly lower sense of ownership ... and that the Suggesting group ...had high sense of ownership” (Blau & Caspi, 2009 p.51), and thus they encourage collaboration mainly through suggesting improvements and less by editing peer work.

In Google docs, suggestion can be made via comments or as a style of editing that requires collaborator approval to resolve.

Appendix E

Screenshot of Pre-discussion Google Doc Brainstorming
Appendix F

Google Drive and YouTube Privacy Settings
Google Drive Privacy Settings

When setting up class folders, teachers can decide whether each student will have a private folder seen only by the teacher, or whether there will be one shared class folder only. Student work created or uploaded to a private folder can only be seen by the teacher or partners or groups designated by the student. Teachers can make ad-hoc folders for groups. A teacher can allow users to ‘view only’ or ‘edit’ any folder or document. Students can make copies of any shared documents and share them with anyone, so it is hard to control privacy of teacher-generated documents. Google Forms default to anonymous submission.

YouTube Privacy Settings

**Private** means only those you invite to view the video can view it (they must have their own YouTube accounts and the maximum number is 50 usernames). Your video will not come up under any search results or your channel list. If you try to share it with someone who wasn’t invited, they will not be able to connect to it.

**Unlisted** means your video will not come up in search results or on your channel either. Only those who know the link can view it, and you can share the link with anyone, even those who do not have a YouTube account/username. This means that this video could still be seen by anyone, but only if they guess the link.