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REFLECTION

Flips and flops

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This article examines the current interest of educators in flipped learning. Although this concept has developed in the online and distance education literature over two decades, numerous current writers are attributing it to an idea formed in 2007 by two K–12 teachers in Colorado, USA. The mechanisms that generate such myths are examined, with emphasis on the confusions, defensive strategies, and *blogfuscations* that cause them in web sites and blogs. In its treatment of the flipped learning topic, Wikipedia.org, often regarded as lacking in accuracy and credibility, has demonstrated that a solid reviewing process can reduce the effects of hype and ensure that an accurate record is maintained. It is recommended that academic journals should enlist the help of their reviewing panels in monitoring hype as it arises and correcting accounts of it on, for example, Wikipedia as a vital quality control measure.

Keywords: flipped learning; blended learning; Khan Academy; Bergmann & Sams; hype; blogfuscation

Introduction

A new ship hove into view recently: flipped learning. "If 2012 was the year of MOOCs (massive open online courses) in higher education," stated Horn (2013), "then the flipped classroom was the innovation of the year for K–12 schools." Since then, interest in flipped learning has spread to higher education, online education and the corporate sector, in all of which it is currently being described as "a hot topic" (Harrison, 2014; Honeycutt & Garrett, 2014; Toister, 2014; Walsh, 2014). For those of us who aim to keep up to date with educational breakthroughs, new terms of this kind and their parentage are a tantalising topic for examination, especially when it comes packaged as "hot."

So what is flipped learning? When multimedia materials and face-to-face instruction are combined, and the students are provided with online material to study at home for discussion with the teacher subsequently, the classroom and the teaching/learning process are described as flipped.

Wait a moment … Doesn't blended learning also do that?

Flipped and blended learning certainly appear to be one and the same, in distance education specifically. As described by Stirling (1999), blended learning also combines "traditional instructor-led training with multiple forms of self-directed training to create flexible … learning formats, both in a traditional classroom setting and online." Since this early definition, blended learning advocates have developed a wide range

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of practices including many that have been standard in education for a century (Simpson, in press). Indeed, Graham (2006), in a well-placed anti-jargon comment, suggested that owing to the ubiquitousness of blended learning methods in education we should perhaps "drop the word blended and just call it learning" (p. 7). Blended learning is an example of methodology that Bax (2003) described as already "normalised" (p. 13), and not really deserving to be dignified by a new label. The term has continued to diversify, however, and in 2013, six blended learning models were defined, with flipped learning identified as a subset of one of them (Christensen, Horn, & Staker, 2013). Benefits of these models include the advantages of freeing up class time for one-on-one teacher–student interaction and the encouragement of mastery learning by the students. The models' problems include the technical and workload challenges of producing multimedia support materials (Atteberry, 2013).

So is there a special ingredient that allows flipped learning to be identified as a breakthrough? Or can those distance educators who have been using flipped practices for years take credit for the idea? Apparently neither. Examining these questions reveals how in the Internet age years of scholarly theory and research can be eclipsed literally overnight, and work in fields such as distance education marginalized by groundless press and blog claims, and by journals and institutions that accept them.

A revolutionary educational philosophy?

Current writers are suggesting that flipped learning is an all-Colorado concept. According to ElearningInfoGraphics.com (2014), it began with an idea about classroom use of video-on-demand by Bergmann and Sams (2012a, 2014a): "In 2008 in Colorado, two chemistry teachers … had an idea…" They filmed their lectures and posted them online for the students to view as homework: "it was an Eureka moment."

In his "History of the flipped class," Bergmann (2011) places their idea at 2007, and recalls how it began to be noticed after he and Sams gave an interview about it on local television:

> They made a short news-clip about what we were doing, and as they say … the rest is history … When we started out we didn't call it the Flipped Class Model … we scoured the internet to see if anybody else had thought the flip. We didn't find anybody and even went as far as considering copyrighting the idea.

In June 2010, Bergmann and Sams joined forces with Jerry Overmyer at the University of Northern Colorado (UNCO) to create a programme about their technique, which at that stage they called pre-vodcasting. UNCO's web site advertised the activities of a related professional community and an annual conference originally held at Bergmann and Sams' school. Later that year, their vodcasting work was renamed *flipping*, and attention to it developed at a rapid rate (Table 1).

Table 1 demonstrates a common practice in the creation of web-based publicity: the registration of multiple domain names by one person or company. On the one hand, this may be taken to demonstrate the registrant's enthusiasm to promote ideas as widely as possible. On the other hand, it has been criticised as "defensive domain name registration":

> The practice of registering the name of your primary domain in different extensions and other variations. For example, the registrant of example.com.au may decide to also register the .com version as well to prevent a competitor from doing so … defensive domain registration can get a little out of hand. (Domain Registration Services, 2012)

Table 1. A chronology of flipped learning promotion (2010–2015).

Date	Event	Notes
12 September 2010	A journalist (Pink, 2010) refers to the vodcasting work of a Colorado high-school teacher, Karl Fisch, as "the Fisch Flip."	Bergmann (2011) has stated that Fisch got the idea and the term from him and Sams.
11 November 2010	A web domain, flippedclass.com, is registered by a domain privacy service in Utah, devoted to the work of Bergmann and Sams.	
Early 2011	The UNCO web site begins to refer to the "flipped classroom," and advertises vodcasting community's events under a new heading, the Flipped Class Network (FCN).	
7 March 2011	Overmyer registers 4 alternative domains (flippedclassoom.com/.info/ .net/.org) to coordinate the FCN's activities.	In August 2012, the FCN was renamed the Flipped Learning Network (FLN).
September 2011	International press reports (Mehta (2011); *The Economist* (2011)) report the flipped learning projects of Californian and Canadian high-school teachers.	
	A day later Davidson (2011) lists these two projects in creating a new "flip teaching" page at Wikipedia.	In August 2014, the "flip teaching" page was redirected to "flipped classroom."
8 December 2011	Bergmann registers a second web domain, flipped-learning.com, focusing on his personal speaking and workshop engagements.	
February 2012	(21 Feb.) The Wikipedia page is updated to include a credit to Bergmann and Sams as having started flip teaching in K–12 education.	
	(22 Feb.) A large amount of additional background material is added to the Wikipedia page, and the credit to Bergmann and Sams as the originators of flipped learning in K–12 education is removed.	
	(24 Feb.) Bergmann registers two more domains (flippedlearning.net/ .org), stressing his origination of the idea with Sams.	This new site uses the same FCN heading as the UNCO site, flippedclassroom.org.
14 October 2012	Bergmann registers a fifth and sixth domain (flippedlearning.co and flipped-learning.co).	
December 2012	The statement about Bergmann and Sams' origination of flipped learning is removed from flippedlearning.org.	
Summer 2013	Bergmann moves his personal information and blog from flipped-learning.com (not updated since) to his personal site, jonbergmann.com.	

Table 1. (*Continued*).

Date	Event
July 2014	The International Society for Technology in Education publishes a book about Bergmann & Sams' "revolutionary educational philosophy" (Bergmann & Sams, 2014a).
October 2013	The Wikipedia page adds a comment that Bergmann and Sams' work draws "almost completely on their own experience. It hasn't been rigorously studied (most people cite only... one research paper.)"
November 2014	The Wikipedia page removes references to Bergmann and Sams from the body of its "flipped learning" page.
Early 2015	Nonetheless, in accounts by journalists and bloggers, Bergmann and Sams emerge as winners of the battle for credit as originators of the flipped learning "hot topic."

An Internet search for this article has identified 28 active web domains with names relating to flipped teaching, learning and classroom processes, of which 18 are currently active. The latter were registered by 11 companies and individuals in the USA, UK, Australia, Belgium, Israel, Japan and Oman. Nine of them owned one domain only, and the remaining 9 were registered by, or on behalf of, Overmyer (3 sites) and Bergmann (6 sites). These data were obtained from the whois.com domain name registration site. The list of sites, including 16 country suffixes, is not exhaustive.

So battle was joined, with rival legions firing off alternative accounts about the "revolutionary educational philosophy" in press releases and blog postings on multiple "flipped" web sites. Currently, University of Minnesota analysts place flipped learning at the peak of the Gartner-type hype cycle (University of Minnesota, 2015); and the Horizon Project (Johnson, Adams Becker, Estrada, & Freeman, 2014; p. 36) – ever the tracker of educational hype (Downes, 2011) – has identified flipped learning as an important development in higher education likely to be adopted in the educational mainstream in a year or less, and credits Bergmann and Sams with having developed "the first well-documented example of the flipped classroom." In his 2014 thesis, Overmyer gave Bergmann and Sams limited credit for their use of "online videos to flip learning" (p. 2), though also acknowledged the earlier work covered on the Wikipedia page. Since then, Overmyer, now Director of UNCO's Flipped Learning Academy, has attached weight to his own development of the idea since discovering it in a Google search in 2011 or thereabouts:

> You could say the rest of the story is history … it's a new teaching model that literally flips the standard classroom setting and may be the way of the future … Seeing a need for a way for teachers to share information about flipped classrooms, Overmyer, who has a doctorate in mathematics education, created an online professional learning network for teachers using vodcasting and the flipped teaching model. (Same, 2015)

Wikipedia deserves particular credit for an effective historical analysis of flipped learning by stressing the wide range of individuals and groups that have developed its theory and practices over 15 years.

Where are they now? Bergmann and Sams have left their high-school teaching positions to concentrate on their speaking and workshop engagements (Bergmann, 2013; Wikipedia, 2015). The FLN's professional learning community that they helped to form is hosted by Overmyer at UNCO (flippedclassroom.org, n.d.), and its resources and events are promoted at flippedlearning.org by Bergmann, Sams, and four other board members. In March 2015, FLN's Professional Learning Network is estimated as having over 24,000 members (flippedclassoom.org, 2015), although this total may actually relate to the number of site visitors who have given their e-mail addresses to access the site's information. Overmyer's (2014) doctoral thesis has evaluated a flipped course and found that "at worst, the flipped section students performed as well as the traditional sections, regardless of teacher experience" (p. 86). As to whether Bergmann or Sams actually had the original flipped idea, Sams states it was him (cited in Wikipedia, 2015).

(Web site details reported in this section were obtained from archive.org, whois.com, and wikipedia.org.).

Two decades of flipped learning

In fact, none of the Colorado teachers originated either the flipped approach or its name. Mazur (1997) has been developing identical practices at Harvard University since the early '90s; and the *flipped learning* term had been in use for a decade when it was adopted in Colorado (Baker, 2000; Strayer, 2007; Tenneson & McGlasson, 2006). Khan (2011) has been very specific in stating that the online videos produced by his Academy "can help create a 'flipped classroom' where online lectures can happen at home and project-based learning can happen during school." The approach was also proposed by Lage, Platt, and Treglia (2000) as "inverted learning," in which "passive activities (such as listening to a lecture) are done outside class and [the classroom] lecture is replaced by workshops, discussion, and activities that require interaction" (McShea, 2009). Bergmann has dismissed the contribution of Lage et al. as irrelevant to his claim to a special place in the history of flipped learning's development:

> In 2000, a couple of professors from the University of Miami wrote an article on what they called the inverted classroom. It didn't take off, because I think it wasn't the right time. *YouTube* wasn't around yet. (Noonoo, 2012, p. 1)

When YouTube was launched in 2005, however, the Khan Academy used it within months to store thousands of videos for flipped classroom usage (Khan, 2011), six years before Bergmann and Sams' first monograph (2012a). Since 2006, the Academy's YouTube videos have attracted over 2 million subscribers and half-a-billion viewings (Khan Academy, 2006). But Bergmann has dismissed Khan's contribution to flipped learning as well, suggesting that the Khan Academy is a mere repository of videos rather than "a vehicle to get to a deeper learning" as permitted by their approach:

> (Critics of our approach) think it's the Khan Academy model where a kid sits in front of a computer and answers all the questions, and that's not at all what we're talking about … (In 2007) we had an idea … prerecording all our lectures … and eventually it became known as the flipped classroom. (Noonoo, 2012)

Since 2010, Bergmann and Sams have nonetheless created several YouTube channels for their own videos (Bergmann & Sams, 2012b; Sams & Bergmann, 2010), featuring the CBS-TV News report of their creation of the "new teaching strategy" (KKTV11 News, 2007).

Since the early 2000s, the blended learning and mastery learning techniques synonymous with flipped learning have also received detailed study in the educational technology literature (Bonk & Graham, 2006) and in a wide range of international distance education projects documented by Latchem and Jung (2010). Relatively few formal evaluations have been reported under the flipped learning heading, a problem stressed by Stager (2012b), although evaluations of flipped classrooms by Strayer (2007, 2012) have identified collaborative approaches that can make flipped learning successful, as well as the following problems:

> (The) classroom flip students were less satisfied with how the structure of the classroom oriented them to the learning tasks in the course. The variety of learning activities in the flipped classroom contributed to an unsettledness among students that traditional classroom students did not experience.

Where have we heard this before? MOOCs too were found to be overwhelming for many students, and had precisely the same technical and workload problems.

Distance education scholars including Bates (2012), and Daniel (2012) gave detailed warnings on that topic for the benefit of educators considering MOOCs as a viable option, although institutions worldwide continued to spend millions on implementing them anyway. Now that the 2014 Gartner Report has pronounced MOOCs "obsolete before plateau" (Ashfar, 2014), flipped learning has rapidly become its logical successor as "a hot topic," even though the only obvious difference between MOOCs and flipped courses, for the present at least, is that MOOCs are massive.

So can the literature of distance and online education, which has dealt with these problems for decades, help to point out the problems of flipped learning? It will not be easy, for the publicity strategies used by Bergmann, Sams, and others have distracted attention away from the origins of the idea, and have eclipsed it in the popular media. They have also apparently discovered the problems of flipped learning for themselves. Their monographs and videos (e.g., Bergmann & Sams, 2012a, 2012b, 2014a, 2014b) deal with the standard challenges of online teaching, and their workshops and annual conferences give training on how to deal with them. For this new generation, details of flipped learning's original pioneers are an awkward home truth and are apt to be dismissed:

> They probably had the idea, at least as far as I know, originally, but we've been calling ourselves pioneers in the movement since we've been the ones in the forefront, at least in terms of K-12 education. (Bergmann, cited in Noonoo, 2012, p. 1)

In 2015, the description of Sams' (2010) Flipped Classroom video on YouTube still states explicitly that "Aaron Sams, along with Jonathan Bergmann were the first to flip their classes." In the interests of truth and accuracy, this should be corrected without further delay.

Blogfuscation

I thought of the term *blogfuscation* while writing this article. I thought it up for myself. Before registering myself as the father of the blogfuscation concept, however – by creating blogfuscation.com or blogfuscation.org – I searched for the term and found that others had already thought it up for themselves. One cynic defines blogfuscation as "when an issue becomes hidden behind a hundred inane blog posts" (Throwaway, 2006). Another (at blogfuscation.blogspot.ca, 2007) quotes a classic line from the TV series *Battleship Galactica*: "You have an amazing capacity for self-deception. How do you do that?"

That question should be put to today's flipped learning advocates. In older times, it would have been phrased, "Are you a knave or a fool? Did you deliberately overlook the previous work on the subject, or were you simply ignorant of it?" No one would probably suggest that today's flipped learning "pioneers" did not in all honesty think up the idea for themselves. It is not a revolutionary concept by any means, and writers have discussed it under different headings in the distance education and educational media literature for far longer than terms such as "flipped" and "blended" have been around. As a respondent to Bergmann's, 2011 blog posting pointed out, "when I was at boarding school 40 years ago, [we] called it 'Prep'." So one can only assume that the new generation has deceived itself into believing its ideas are new.

But how is it possible for individuals who have no apparent background in a field to claim to have pioneered it even to the point of considering copyrighting their ideas? One explanation is that when they first blogged about flipped learning,

Bergmann and Sams were unfamiliar with the online and distance education literature. By their own account, they relied on an unyielding Internet search to check whether or not the idea was original. K–12 teachers in the USA are not normally expected to be familiar with the distance and online education literature. Even university and college presidents in the USA do not appear to read this literature, witness the recent claim by the Global Learning Council that there is no prior evidence on how to implement online courses (Baggaley, 2014). It is also easy to understand the need felt by these latter-day advocates to dismiss the work of others in the field, since their reputation as flipped learning pioneers is a territory they naturally wish to protect. Sadly, deliberate oversights of educational precedents are not uncommon in education, among:

> authors who have chosen to ignore them … substituting a revised version of previous work, either to deflect respect for the earlier work or to exaggerate the importance of what has been developed … (These) negative behaviours are academically repugnant. (Moore, 2014)

Another lesson of the 2010–2015 flipped learning period is therefore that the more web site and blog strongholds one can build, the more likely one is to emerge as the apparent leader in a field, since web sites and blogs typically do not require their writers to verify their sources and originality. The larger the number of blogging collaborators one can gather together, the more they can go forth and multiply one's personal version of history far and wide; and, as the FLN's conference programmes demonstrate, today's followers of flipped learning are also primarily K–12 teachers whose jobs do not depend on knowing the pre-existing practical research either.

Conclusions

This analysis of educational hype in the Internet age reveals a growing schism between the traditional and modern promoters of theory and practice, with new approaches failing to take account of the traditional culture. As long as the bases and effects of hype are unchallenged, this situation will only grow worse. A recent attempt by the US Target stores to move into Canada failed to take account of background research in this way (Charlebois, 2015), and flopped at a cost of billions. Similar mistakes were made in the emergence of the MOOC from marshy blogland origins. When their warnings went unheeded, experts in fields including distance education were unable to prevent the wastage of millions on ill-conceived MOOC projects. If, as may be predicted, the companies formerly known as MOOC providers now offer support for worldwide flipped classrooms, their mistakes will be repeated, and the MOOC will have found a logical successor: the Gigantic Open Online Flip or GOOF!

What can educational journals do to challenge this recurring scenario? They would be failing the rigour and reputations of those who have published in them if they did nothing. One approach is for specialists to speak frankly and openly about the problems of their field in the blogging age, as Lange did in her 2011 critique of the MOOC's "connectivist" origins (as cited in Mackness, 2011). Stager (2012a) observed ruefully that criticising trends does not win friends ("Do I wish to gore yet another sacred cow? Is speaking truth to power worth the collateral damage done to my career?"); but he went on to be absolutely frank in his criticisms of flipped learning anyway (Stager, 2012b; Straumsheim, 2013).

Another solution would be for specialised educational journals to consider the fact that they will never be read by countless theorists and practitioners, and need to find complementary ways of communicating their expertise. With respect to flipped learning, Wikipedia so far seems to have had more success than the academic journals in setting the current record straight, owing to its status as the most widely read information source in the world. Perhaps academic journal editors should organise commando sorties by their legions of reviewers, to monitor ill-based hype as it arises and to correct it on, for example, Wikipedia before it creates new myths.

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Notes on contributor
Jon Baggaley is Emeritus Professor at Athabasca University, Canada, and Associate Fellow of the British Psychological Society. Baggaley's pioneering work as the Father of f-Learning (fingernail learning, Baggaley, 2008) gained him the Mendacity Prize for 2011. Archive.org shows that his website (baggaley.com) was registered in 1999 in the tax haven of Tajikistan.

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