A longitudinal comparison of information literacy in students starting Politics degrees

Abstract
Information literacy, the concept most associated with inculcating the attributes necessary to behave in a strategic, thoughtful and ethical manner in the face of a superfluity of information, has been part of the information specialist scene for many years. As the UK's QAA benchmark statements for Politics and International Relations highlight, many of the competences associated with this concept are vital in the honourable struggle to become a successful graduate of those disciplines. The primary purpose of this article is to present a longitudinal study of a survey used to expose the information literacy levels of two groups of first year Politics/IR students at a British university (one cohort from 2009/10, the other from 2017/18) and, using the logic of 'most similar design', make informed inferences about the level of students' information literacy on coming into tertiary education.

Keywords: comparative research, information conservatism, information literacy, Politics and International Relations, 'seven pillars' model.

Introduction
In 2006 an article was published in (what was then) *LATISS: Learning and Teaching in the Social Sciences* with the title 'Information Literacy and the Teaching of Politics' (Thornton 2006). The case was made that 'a quiet-librarian-led revolution' was underway (Thornton 2006: 29). In the latter part of the twentieth century information had been liberated from the finite bounds of the library. The masses, at least those suitably connected to the 'information superhighway', gained access to resources once restricted to the elite. However, as so often with revolutions, there were snags. Though plentiful information was readily available, the skills needed to tease the information regarded as authoritative out from the less reliable lagged behind, creating problems for society in general and for those trying to understand the political world in particular.

One important goal of this article was to raise the profile amongst those teaching Politics and International Relations (IR) of a concept many information professionals had deployed in response to this revolution: information literacy. Though, as will be explored, information literacy has developed into a contested concept, at its simplest it was – and remains for many – the term used to describe the various competencies and intellectual attributes involved to locate, evaluate and deploy effectively and ethically any information needed to fulfill a particular task, principally in the context of the growing amount of information generously being made available online (Coonan et al 2018) ~~(SCONUL 2015)~~. In 2006 i~~I~~t was argued that to be a successful graduate of Politics and/or IR actively required acquisition of sophisticated information literacy competencies, an argument supported through drawing connections between some existing Quality Assurance Agency (QAA) subject benchmark statements for Politics and IR and competencies identified in a widely recognised information literacy framework, ~~namely~~ this being the 'seven pillars' model drawn up by the UK Standing Conference of National and University Libraries (SCONUL). This framework ~~,~~ ~~which~~ suggest~~s~~~~eds~~ a progression from a basic level of~~-~~ basic information location skills through ever increasing levels of information complexity ~~sophistication~~ to the seventh level, or 'pillar', which include~~sd~~ the ability to synthesise and build upon existing knowledge (SCONUL 1999; Thornton 2006: 30-31).

To assist in shaping exercises to support ~~assist~~ this process within students in my own ~~class~~institution (Cardiff University), a questionnaire was designed in close collaboration with various information specialists, and questions were posed about the existence of prior information

literacy education, which types of information were being used by students for their assessments, which databases were being employed, how the quality of found information was being judged, and how aware the students were about the processes through which information is acknowledged in academic work (Thornton 2006: 39-43). Though designed primarily as a diagnostic tool, it also functioned as a useful snapshot of the information behaviours of a particular group of students at a particular moment in time.

This small-scale study suggested that, in the latter half of the first decade of the twenty-first century, a not untypical cohort of relatively experienced students at a respected British university were struggling to find strategies to contend with a deluge of information available in quantities unimaginable not many years before. Other larger scale studies, with students at different stages of development and in different countries, told a strikingly similar tale (for example, Head and Eisenburg 2009).

The original questionnaire reviewed in the 2006 article was completed by a group of third year students studying a module on public policy in the spring semester of 2005. However, it soon became apparent the best moment to make an audit of students' information behaviours was as early as possible into their time at university, to provide more opportunities to address any obvious issues. Thus, similar audits were carried out at the start of future academic years but with first year students starting a foundational module on comparative government (Thornton 2010).

The aim of this article is to update this research. This will involve briefly exploring the evolving conceptualization of information literacy as it eases into its fifth decade of use. However, the main feature will be presentation of the results of a diagnostic questionnaire similar to that explored in the previous decade. The new responses are from a group of first year students from the 2017-18 cohort taking Politics and IR modules at Cardiff University. These responses provide clues about particular students' own attitudes to information as they enter the UK university education system. In addition, as the questionnaire used in 2017 strongly resembled one deployed in 2009, and the cohort of students surveyed was likewise similar, it is possible to use the logic of 'most similar design' – that is a comparison in which the circumstances of the cases studied are as close as possible in order to limit the number of factors that could be used to explain variation in outcome – to make a ~~modestly~~ meaningful ~~judgement~~ inferences about any differences. ~~whether~~ Furthermore, it will be possible to assess whether students entering a fairly typical British university to study Politics and IR manifest signs of increased information literacy in 2017 compared to 2009.

Commented [A1]: Not all readers will be familiar with this term – can you add a few words of explanation?

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Information literacy

Since ~~the last survey in~~ 2009, one important development has been the increasing mainstreaming of information literacy. Where once it was largely the preserve of information specialists, information literacy has become a widely discussed concept throughout the world of education, and beyond into society as a whole. Indeed, at approximately the same time the survey was completed, President Obama proclaimed October 2009 to be Information Literacy Awareness Month, stating:

> Every day, we are inundated with vast amounts of information. A 24-hour news cycle and thousands of global television and radio networks, coupled with an immense array of online resources, have challenged our long-held perceptions of information management. Rather than merely possessing data, we must also learn the skills necessary to acquire,

> collate, and evaluate information for any situation [….] An informed and educated citizenry is essential to the functioning of our modern democratic society, and I encourage educational and community institutions across the country to help find and evaluate the information they seek, in all its forms (Obama 2009).

In the UK, if lacking the distinctive charisma of the former US president, there was still evidence of a growing awareness of information literacy. There have been various innovative and worthwhile information literacy projects and strategies for school-age children (Streatfield et al 2011; Smith 2016a), and there have been national plans, such as the National Information Literacy Framework for Wales, designed to provide 'a clear and integrated development structure for practitioners delivering information literacy at all levels.' (Welsh Information Literacy Project 2011). If increased awareness was the main factor driving information literacy levels, it would be expected that some of this activity has increased levels of information literacy.

Though knowledge about information literacy has spread, it is also worth noting that since the publication of the original article, the concept itself has evolved. It was attacked initially for lacking a sufficiently critical edge and being overly focused on 'tool-related skills or on preparing students to succeed in upcoming research assignments' (Lenker 2016: 3). This has led to the development of a distinct *critical* information literacy. For advocates of this approach, the ultimate goal is not simply to make people more adept with their information choices as part of their work or study but to 'reverse trends of exclusion from political participation and enable people to participate in the decisions and events that effect their lives' (Whitworth 2009: 118; see also Cope 2017). There is a danger, to use Sartori's term, of conceptual stretching (author 2012; Todd 2017).

Nevertheless The ongoing process of re-conceptualisation of the concept has not always aided the promotion of information literacy beyond the relatively small world of information professionals (Thornton 2012; Todd 2017). That there are now a 'plethora of literacies' trading in a similar territory - such as digital literacy and , media literacy – hasalso canalso created some confusion (Hepworth and Walton 2009: 16). Nnevertheless, in recent times, information literacy has become not just a mainstream idea but also a progressively more *political* one, and has developed into an increasingly lively, contested and powerful concept. Indeed, there are now established journals that explore the changing nature of the concept and the ways in which it has been implemented, for example the *Journal of Information Literacy* and *Communication in Information Literacy* (both founded in 2007) and the political angledimension has been explored with increasedingparticular rigourrigour (for example, see, for example, the work of Smith 2013; 2016ba). and .

The surveys

As noted, this article seeks to use the logic of 'most similar design' to enable some informed inferences about the level of students' information literacy on coming to university. The surveys are not identical (in ways that will be described later), but they are sufficiently similar to make meaningful comparison, as are the student cohorts who completed the surveys. Similar questions were presented at the same early stage in the students' university life, on the same module (an introductory module on comparative government), at the same university, to students of similar academic talents (the A level or equivalent requirements for entry onto Politics programmes being broadly similar in 2009 and 2017) and from a similar demographic background and mix of nationalities. This makes for a classic longitudinal study in which most variables are controlled for (Przeworski and Tuene 1970).

With the time between the surveys filled with information literacy becoming the subject of various frameworks, strategies and even 'awareness months', ~~the~~ a reasonable hypothesis to be tested is that when students (particularly those likely to have studied humanities and social science A levels or equivalent at school) entered university in 2017 they displayed more awareness of certain features of information literacy than those from eight years ago.

In both 2009 and 2017, the respondents came predominantly from ~~m~~ the UK (the clear majority of those from the south of England and Wales), but with a sizeable minority coming from a variety of countries beyond the UK. In 2009 this included students from Germany, Italy, Spain, Poland and the United States and a relatively large cohort from France. The 2017 cohort again included students from France (though fewer in number than in 2009), Spain, Germany, US, plus some from Cyprus, Bahrain and Bulgaria. Though no record of age was made in 2009, in 2017 there were only two students in age brackets above 30, which was almost certainly a reduction in the number of mature students that completed the survey in 2009.

The original survey (which invited both qualitative and quantitative responses) included seven questions, and all but two of these were open questions to allow the students the freedom to respond in their own words. The ~~second~~2017 survey included these seven questions to allow for comparison, but also~~.~~ included three further questions related to changes in the information landscape. Though responses to these new questions are obviously ~~are~~ not part of the comparative study, they are included as they provide further insights into contemporary information behaviours, and hopefully provide information for future comparative work.~~-~~ There was also an ~~major comparative~~ issue regarding the comparability of responses to the first question, which is about previous information training. In 2009 the questionnaire was completed after a tour of the relevant university library, whereas, in 2017, it was not, with the result that more students in the earlier cohort identified university as a training place, making direct comparison ~~impossibl~~problematic~~e~~. ~~The second survey included these seven questions to allow for comparison. However, T~~the seventh question, about referencing, was re-formulated, which – though adding further insights about students' conception of a key component of information literacy ~~, referencing –~~ again muddi~~ed~~~~ied~~ the comparison. Nevertheless, despite these issues, the cases reman sufficiently similar to make useful inferences based on comparison between the two cohorts. ~~The 2017 survey also included three further questions, related to changes in the information landscape. Though responses to these obviously are not part of the comparative study, they are included as they provide further insights into contemporary information behaviours, and hopefully provide information for future comparative work. There was also a major comparative issue regarding the responses to the first question on previous information training. In 2009 the questionnaire was completed after a tour of the relevant university library, whereas, in 2017, it was not. This meant more students in the earlier cohort identified university as a training place, making direct comparison impossible.~~

~~Nevertheless, the responses are worth recording, not least for the appearance in the latter survey of new sources of information literacy education.~~

~~The 2017 survey also included three further questions, related to changes in the information landscape. Though responses to these obviously are not part of the comparative study, they are included as they provide further insights into contemporary information behaviours, and hopefully provide information for future comparative work.~~ ~~The numbering will follow the 2009 version, with the 2017 only questions added at the end, though, on the 2017 survey, itself they were questions 3, 5 and 6 as they fitted less awkwardly in those positions.~~

~~In both 2009 and 2017 the students were recently enrolled on an introductory module on comparative government.~~ In 2009, 110 students responded to the questionnaire out of a possible 166, a 66 per cent response rate. In 2017, remarkably, 110 students again responded, though this time it was out of a possible 274, a 40 per cent response rate. As approximate correspondence is more important here than statistical accuracy, and the number of respondents was identical each time, in data that follows it is the actual number of students who responded that is indicated rather than percentage terms. The questions were designed so the students could respond with more than a single answer, thus columns rarely add up to 110.

The remainder of this section will interrogate the surveys, highlighting points of comparison, contrast and general interest.

Table 1
Question 1. Have you received any training in locating information? If yes, provide brief details of this training, including where you received it?

Responses	**Number of students**	
	2009	**2017**
university training (home or other)	45	11
general school/sixth-form	4	6
as part of A level coursework	0	14
as part of an EPQ (Extended Project Qualification)	0	9
as part of the Welsh Baccalaureate	0	3
as part of a MOOC (Massive Open Online Course)	0	1
no or negative response	61	70

As noted above, comparison here is flawed. Nevertheless, it is notable that, in 2009, only four students noted that their schooling had provided training for locating information. Examining the slightly richer contextual detail exposed by the students in 2017 it is interesting that certain disciplines, not least History, were heavily represented; indeed, of the fourteen students who identified A-level coursework as a source of information training, ten students specified that subject. Perhaps of most significance was the appearance relatively new forms of qualification with an explicit skills element, such as the Extended Project Qualification (EPQ) and the Welsh Baccalaureate. Neither existed in 2009, and both were highlighted by some students as particularly valuable sources of information training. For example, the EPQ – a relatively recent addition to post-16 education within most parts of the U.K., the equivalent of half of the more traditional A level – provides an opportunity for pupils to engage in a substantial largely self-directed research project and it has, as one of its foremost learning objectives, to:

> obtain and select information from a range of sources, analyse data, apply it relevantly, and demonstrate understanding of any appropriate connections and complexities of their topic (AQA 2018).

Nevertheless, despite this indication of increased awareness of information literacy in some schools, it remained the case that the clear majority of students in the questionnaire, even in 2017, either provided no response or actively declared they had not experienced this type of basic information location training.

Table 2
Quetion 2: When preparing for writing essays or other assignments, which types of information have you used? (please tick any that apply)

Responses	**Number of students**	
	2009	**2017**
book	110	107
website	89	97
journal article	70	67
newspaper article	58	72
e-journal	57	28
e-book	34	27
Sources added to list in 2017		
periodicals such as The Economist		46
Social media		29
Others written in by students 2017		
'mark schemes'; 'coursework notes'; 'own empirical survey'; 'radio/podcast'; 'pre-written essays'; 'radio'.		

There is less of a contrast between the 2017 and 2009 results than might be expected. The positions of the two top sources – books and websites – remained the same, though it is noticeable that websites are now similarly (almost) ubiquitous. Journal article usage remained at similar levels. One further notable feature was – with the exception of websites – the lack of growth in engagement with sources accessed through electronic devices. Indeed, back in 2009, more students reported using e-books than did eight years later. The 2010 article noted a prediction made by CIBER (the Centre for Information Behaviour and the Evaluation of Research, then based in University College London) that, by 2017, 'electronic books, driven by consumer demand, will finally become established as the primary format for educational textbooks and scholarly books and monographs, as well as reference formats' (CIBER 2008). This now looks premature, and possibly a forecast to file with Decca Records' famous hunch – expressed when dismissing The Beatles in 1962 – that guitar music was on its way out, though it should be noted that there may have been differences in the way the word 'e-book' was interpreted by many students. ~~, not least over the passage of time.~~

Despite increases in the variety of information made available in the last decade, the resources students in 2017 declared they regularly used for their work seems strikingly similar to those used eight years ago. That social media – a new category for 2017 – was reported to be used in an educational capacity by only one-quarter of the students again perhaps suggests a certain information conservativism. This tallies with the findings, from the US, of Head, who noted that college students, in response to having to deal with ever more forms of information, often retreated back 'the same "tried and true" resources' (Head, 2013: 475).

Table 3
Question 3: Regarding electronic sources, which, if any, of these have you used? (please tick any that apply)

Responses	**Number of students**	
	2009	**2017**

Google	98	108
Wikipedia	72	75
JSTOR	40	18
Nexis	33	5
Scopus	26	0
Google Scholar	25	51
Web of Science	19	1
International Bibliography of the Social Sciences	10	1
British Humanities Index	7	11
Ingenta Connect	5	0
International Political Science Abstracts	2	5
Others written in by students 2017		
Fordham University source library'; 'YouTube'; 'BBC'; 'Politics Today'; 'Bing'		

These findings are particularly interesting. In 2009 it was noted that, though there were indications that some students had arrived at university with an awareness of online sources of information beyond Google and Wikipedia, with JSTOR (the digital archive of academic journal articles) and Nexis (the newspaper database) figuring most prominently, the two 'usual suspects' were far ahead, with Google being virtually ubiquitous. Skip forward nearly a decade, and the results were similar. Indeed, the figures for use of Google and Wikipedia are almost identical, with those for alternative online information resources again far behind. Indeed, results for all – except the British Humanities Index and the special case of Google Scholar – declined in 2017.

Table 4
Question 4: Imagine you were asked to find information on a database for a project entitled 'A comparison of two authoritarian regimes'; tell me which words and symbols might you use?

Responses	**Number of students**	
	2009	**2017**
repetition of words in the project title	47	16
use of a truncation symbol	24	–
phrase search e.g. use of quote marks	13	22
use of synonyms and/or examples (e.g. dictatorship, Belarus)	11	20
Boolean operators (e.g. AND, OR, NOT)	6	5
No response	13	52

Unlike the second and third questions, in which options were provided, in this instance students had to write in their responses, which were interpreted and assigned the categories noted above. The responses to this question did illustrate a striking contrast between 2009 and 2017. This contrast was less in the actual written responses – in both years there were examples of students who admitted to a range of sophisticated searching skills, though only a minority – but rather the considerable increase in the numbers who felt unable to respond. Indeed, it appears that, for many of the 2017 students, the question itself made no sense. In addition to the near half who left the question box without comment, two students responded with a question mark and another wrote, 'question is unspecific'. In 2009, most students were able to write some answer to the

same question, even if the responses suggested that most utilised relatively unsophisticated search strategies. Not so the 2017 cohort. Combined with the results of the third question, it seems plausible to suggest that a smaller proportion of the students currently studying Politics at ~~XXX~~ Cardiff University are familiar with accessing and using databases that employ more creative techniques (those more ~~taxing~~advanced than ~~than~~ those typically used to ~~prise open~~search Google) than was the case in 2009. It is worth noting that this change may simply reflect general advances in the ease of use/simplification of many database search engines.

Table 5
Question 5: What, if any, criteria do you use to assess whether a website contains information reliable enough to use in your assessed work?

Responses	**Number of students**	
	2009	**2017**
reputation of author(s)	39	38
reputation of website	37	40
display of references/citations	28	23
professionalism of layout	17	7
website referenced elsewhere	17	21
currency of the website	13	17
presence of obvious political bias	7	20
recognized domain/URL (e.g. ac.uk, .gov)	5	7
recommended by teacher/tutor	4	5
presence on citation index	2	–
potential for open editing	1	4
check using RefME	–	11
credibility of publisher	–	2
popularity amongst students	–	1
No response	11	17

Like the previous question, there were no options provided. Students had to write unprompted which criteria, if any, they used to assess the quality of this particular, often problematic, source of information. As can be seen, there are many similarities with the results of eight years ago. Consideration of the reputation of the website, the credibility of the author(s), the presence of references/citations, and some element of cross-referencing remained the most popular quality control criteria, with very similar percentage response rates across the years. Similarly, though a clear majority of students were able to consider some criteria, in 2017 as much as in 2009, only a small proportion came close to putting together a response that came close to a coherent web evaluation strategy such as that recommended by Jim Kapoun (1998; see also Cornell University 2017).

The potential for bias was noted by more students in 2017, possibly a reflection of the dawning of an era in which 'fake news' has become part of the lexicon. One further notable difference was the presence in the responses in 2017 of the citation management tool RefME, a popular citation management tool which allowed the creation of references through the deft scanning (usually through an app) of a book or journal. Though useful as a device for generating citations automatically, the quality control features were limited. Incidentally, RefME was shut down in March 2017, replaced by CiteThisForMe.

Table 6
Question 6; What do you understand by the word 'plagiarism'?

Responses	Number of students	
	2009	2017
using work of others without giving due credit	62	40
similar, but using term 'copying'	42	49
similar, but using term 'stealing' (or other term suggestive of criminality)	2	12
awareness that plagiarism can be unintentional	–	5
self-plagiarism	–	1
No response	4	4

Turning to the ethical side of information literacy, the surveys display a similar level of awareness about the concept of plagiarism across the decades. It remains almost universally regarded – at differing levels of refinement – as a form of academic dishonesty involving the use of another's work without acknowledgement. Indeed, the only marked difference between 2009 and 2017 was an increase in proportion of students keen to emphasise the grave seriousness with which plagiarism is generally regarded by educational authorities. A greater proportion of students in 2017 included an explicit moral dimension in their definitions, with many equating plagiarism to 'cheating'. Indeed, there were more conceptualisations that suggest some students see plagiarism as a criminal offence, with comments such as plagiarism is: 'forging someone else's work with the intent of presenting as your own'; 'stealing someone else's work, copy exactly someone else's words, a felony'; 'illegally copying the work of someone else to use as your own'. The responses in 2017 did display more understanding about the various dimensions of plagiarism, with a small number acknowledging the possibility of unintentional plagiarism.

Table 7
Question 7: a) What do you understand by the term 'referencing'? b) If you have referenced your work, what particular problems have you faced?

Responses	Number of students 2017
a) ~~a)~~Understand by the term referencing	
a system indicating where you have used someone's previous work	71
a system used for acknowledging the provenance of quotes	14
the act of inserting footnotes into a text	8
the act of listing sources at the end of an essay	6
a system of using other's work to support one's own argument	2
a system whereby information can be checked for accuracy	1
no response	18
b) ~~b)~~ Problems	
finding/tracing/re-tracing all the information required	19
knowing how to lay out a reference, when to reference, or which type of referencing system to use	17

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time and effort involved	7
this part of the question left unanswered	59

There was a question about referencing on the 2009 survey, but this~~it~~ proved ambiguous, so it was changed for 2017 in order to investigate more fully students' conceptualisations of this particular academic convention. Thus, direct comparison across the years is not possible here. Nevertheless, it was worth improving this question, because as Sarmiento-Mirwaldt (2016) has pointed out, referencing is a vital skill for students, but one which many struggle to grasp. Emphasising the importance of this particular aspect of information literacy, Sarmiento-Mirwaldt notes:

> In order to use academic sources in their essays and assignments, students need to be able to place references in the text or footnotes in the appropriate places and to list their sources correctly in a bibliography. More broadly, a sound referencing routine is indicative of a deeper understanding of the collaborative nature of academic knowledge creation (Sarmiento-Mirwaldt 2016: 210).

Of the students surveyed, over half wrote responses that highlighted the importance of acknowledging debts to earlier knowledge providers. Moreover, some of the other responses suggested a sophisticated understanding of knowledge creation, with one writing: 'Referencing is the act of using respected work and arguments and using it to build up and support the points you are making'. However, other responses suggested that, for some, referencing was conceptualised as an activity that involved exclusively attaching names to quotes.

The problems identified suggested that, even those students who had experience of referencing before entering university, face difficulties. Most of the responses suggested that procedural issues were most vexing, such as working out which format to deploy and how best to re-trace the information used. There were also some responses that highlighted that the expansion in the different types of information ~~generally~~ made readily available has created problems. For example, one student wrote 'finding an author from some BBC articles', another 'yes, if through Google Scholar, finding all the info to reference text with it and which way round to put it correctly'.

The following questions were new additions to the 2017 survey, so comparison with 2009 is not possible, but the responses do expose insights into contemporary student views on various sources of information and could be used for future comparative work.

Question: If you use social media for assignment purposes, identify which type (e.g. Facebook) and explain briefly how you use it.

Responses (all 2017)

7 students highlighted Facebook alone, commenting:
Use articles shared through people on Facebook from newspapers etc.
Newspapers on Facebook for general information
Facebook to promote my research
Facebook – poll for surveys and opinions
Facebook – alternative news pages carry politics around the world. Then I research the facts independently.

Facebook – news articles

12 students highlighted Twitter alone, commenting:
Twitter to stay up to date with current affairs
Twitter – world news and info
Twitter – to keep track of the latest political news and events
Twitter for polls
Twitter – as I check the BBC news page for global updates
Twitter – following users such as the news, politicians, etc.
Twitter to find articles from newspapers such as *New Statesman*, *Guardian*, *Economist*, etc.
Twitter – re-tweet key quotes etc., different viewpoints
Twitter – what's trending and assessing the posts with the most likes and re-tweets
Twitter – quotes especially for my A-level Politics
Twitter – Donald etc.
Twitter – looking at influential people's opinions and also questionnaires

8 students highlighted both Facebook and Twitter, commenting:
Use Facebook/Twitter when writing public opinion pieces
Twitter, Facebook
Facebook and Twitter to look at the polls and comment sections and study popular opinions
Facebook and Twitter – to project questions onto a larger target audience
Twitter/Facebook – follow political commentators who post links to relevant articles
Facebook, Twitter
In A levels to prepare for writing essays. I have used Facebook to communicate with classmates about ideas. Also, I have used Twitter to view statements made by leaders (e.g. Trump).
Facebook and Twitter to share surveys to get primary data

1 student highlighted YouTube alone, commenting:
YouTube – VICE documentaries for information

2 students highlighted social media use in general without specifying which one, commenting:
Primary research, such as survey/questionnaire distribution
Used social media to distribute a questionnaire for primary research

4 students claimed they did not use social media either at all or nor for schoolwork, commenting:
Do not use social media
I do not tend to use social media for assignment purposes because often times it could be biased or untrue since it can be posted by anyone anonymously
No, I do not use it
None. Not a reliable source at all.

The other 76 students left no response.

This question sought to disclose information about the students' use of, and opinions about, social media. As noted in the responses to the second question, the majority of the students asked did not record social media as a source to use to help prepare assignments, which provides some explanation for the relatively large non-response rate for this particular question. Of those that did respond, the only social media formats registered in numbers of any import were Twitter and Facebook.

It was also notable that some students were able to discern particular features of social media that are particularly useful for political scientists, such as easy access to polling data, as well as the ability to gain easy access to multiple viewpoints for political news – and the unfiltered opinions of the current US president. Also worth highlighting are the declarations by those few students who did not use social media or, if they did, treated it with considerable suspicion.

Question: Name three websites you are happy to use.

Website	number of students responding (all 2017)
BBC News (including Welsh-medium site)	52
The Guardian	29
The Economist	19
Wikipedia	19
Google Scholar	9
Google	6
GOV.UK (Government website)	6
JSTOR	6
The Independent	5
The Times	5
Financial Times	4
Google Books	4
YouTube	4
Huffington Post	3
Politico	3
United Nations website	3
National Archives	2
Charity Commission	2
New York Times	2
Reuters	2
Sky News	2

There were 17 additional sources that were identified by just a single student, including Al Jazeera, *Daily Mail*, *The Telegraph* and Spartacus Educational.

The most noticeable feature of these responses was overwhelming victory in the information trust stakes for the BBC. This data tallies with the recent Ipsos Mori poll which suggests the BBC is by far the most trusted source of news in the UK: in reply to the question, 'of all the news sources (TV broadcaster, radio, newspaper, magazine or website), which one source are you most likely to return to for news you trust most?' 57 percent responded the BBC; ITV was next at 11 percent (Ipsos, 2017). Though Ipsos Mori was looking at all the BBC's content not just its website, the high levels of trust placed in the BBC as an institution producing trustworthy information compared to all other sources is strikingly similar.

This result also matches the findings of Smith and McMenemy (2017) in their qualitative exploration of young peoples' perceptions of political information. Though again considering all the BBC's content, not just its website, Smith and McMenemy noted that the participants of their studies (aged 14-15) rated highly the BBC News – and programmes such as *BBC Question Time* – in terms of quality and perceived lack of bias. In comparison, general internet sources, such as

Google were less trusted, one participant of the study remarking: 'BBC news tells you like a more, not a biased opinion, do you know like, whereas Google, you could click on a website what's more biased' (Smith and McMenemy 2017: 889). A future survey will ask why particular sources, such as the BBC, are so trusted.

Question: Name a website you would not use, and briefly explain why not.

Website	Percentage of students responding (all 2017)
Wikipedia	54
Daily Mail	7
The Sun	4
Facebook	3
Personal blogs	3
Any politically motivated website	2
Answers.com	2
Buzzfeed	2
The Canary	2
The Independent	2

There were eight additional sources identified by just a single student, including Breitbart, *The Mirror*, and Marxist.org. Two further comments were: 'I'm not really fussy, anything that looks dodgy or biased' and 'any site connected to extremist ideology'.

Reasons given

Wikipedia – various versions of 'open edit' and/or 'unreliable' (60)
Wikipedia – 'heavily advised not to'
Daily Mail – 'often too biased'; 'renowned as being a politically affiliated newspaper'; 'heavily polemic and often over-exaggerates its content'; 'unreliable information'; 'subjective information'; 'politically fuelled'
The Sun – 'as its purpose is less to inform as it is to try and sell as much as possible, meaning sources are unreliable'; 'too biased'; 'biased reporting, can be non-factual'; 'subjective information'
Facebook – 'never verifiable'; 'not reliable, everyone writes own opinion'; 'I would not use Facebook as a source of information for assessed work as it is more difficult to establish the legitimacy of the posts and many are heavily opinion based over fact.'
Personal blog – 'a personal website that could be run by a random person that is not a specialist; 'may be more opinion based than factual'
Buzzfeed – 'little research used'; 'too sensationalist'
The Canary - 'not well researched (see recent Laura Kuenssberg article)'
The Independent – 'left leaning news page contains strong bias'
Yahoo answers – 'because most answers on there are written for comedic purposes'
Breitbart – 'I don't trust the motives of its contributors'
Answers.com – 'doesn't usually provide in-depth answers'
Reddit – 'the information on the forum is provided by users and is likely to be invalid or filled with errors'
Marxist.org – 'heavily one sided, fails to acknowledge other sides of the argument'
Twitter – 'biased and misleading headlines'

One of the most striking aspect of this list is how distrusted Wikipedia remains. Though – from an information literacy perspective – at first this response rate is encouraging as it indicates that many students are aware that some sources of information are regarded as more reliable than others, the refusal of many to engage with Wikipedia (or at least claim not to) is not unproblematic. As Selwyn and Gorard argue, Wikipedia does possess a useful role 'with initial orientation and occasional clarification of topics and concepts which [the students] would subsequently research more thoroughly elsewhere' (Selwyn and Gorard 2016: 33). Other student responses highlight that a minority are aware of the perils of bias in certain publications and allow that to influence whether they are willing to use that source in their work. Though only registering low numbers, the *Daily Mail* and *The Sun* led the way here, though the left-wing political blog *The Canary* and – perhaps more surprisingly – the 'left-leaning' and 'strongly bias[ed]' *Independent* were picked out by more than one student. More work is required to interrogate students' perception of bias.

Interpretation of the results

The results of the comparative element of this research suggest that the hypothesis that a similar cohort of students would arrive at university with demonstrably higher levels of information literacy in 2017 compared to 2009 is not supported. There is some indication that there are bright patches of pre-18 information literacy education, not least innovations such as the EPQ, but it remained the case that the majority of students were unable to identify specific training to help them with one of the most basic features of information literacy, finding relevant material. Though some students in 2017 did demonstrate solid levels of information literacy in many fields (including the ethical aspects), the surveys also provided little indication that, in general, these particular students were any more ~~able to~~ discerning uses ~~that~~ of ~~some~~ information in their academic work ~~sources than were more appropriate than others for their academic work~~ than their 2009 counterparts. ~~Indeed, there is evidence that the abilitity of many students to grapple with search engines has diminished.~~ , Nnor was there evidence that students were ~~they~~ significantly bolder about their information choices. Indeed, ~~there is evidence that~~ the willingness and ability of many students to grapple with a variety of electronic repositories of information, other than the obvious one, seems to have ~~has~~ diminished.

~~The limitation of the data restricts the ability to generalize, but~~T ~~this comparative~~ study ~~study in one institution does gently suggest~~suggests that universities – if tempted by the assumption that most students entering the tertiary sector are already capable consumers of information – would be unwise to row back on providing their own information literacy education. ~~Indeed, this particular survey is being used to inform Cardiff University's future information literacy strategy.~~ This is in no way a criticism of information literacy education at school-level; clearly there is excellent work going on. For example, as Smith (2016~~ab~~) documents, inspirational work was conducted by school libraries in Scotland around the 2014 Scottish Independence Referendum and the following year's UK-wide General ~~UK Parliamentary~~ Election. However, as Smith rightly notes, in order for this work to continue 'schools must provide an appropriate level of school library resources, including staffing~~.~~' (Smith 2016~~ab~~: 16). In times of reduced school budgets, in the UK and elsewhere, school libraries have proved vulnerable, as have public libraries. In many cases, as awareness of information literacy has increased, so resourcing for its delivery has disappeared.

Though not part of the longitudinal comparison, the student responses to the new questions regarding social media and preferred website sources suggest that, if anything, the need for information literacy education at university will only increase. They suggest that there are more potential pitfalls for those current students trying to navigate a safe path to knowledge

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(particularly political knowledge) than were faced by earlier cohorts. Furthermore, despite some of the more hyperbolic expectations of the so-called 'digital natives' literature (Prensky 2001), it seems – as Kirscher and Bruyckere (2017) have argued – there is no reason to suggest those born into a digital world are any more naturally adapt at navigating it than previous generations. This study does appear to support Kirscher and Bruyckere's position, and the findings are being be used to inform Cardiff University's future information literacy strategy.

Conclusion

As President Obama observed, for a healthy, democratic society, it is important that all citizens have access to an education that instils sufficient information literacy. For students (and scholars) of social science disciplines in general, such education is utterly indispensable. Indeed, without possessing the attributes associated with this concept, not only is it difficult to navigate the increasingly digital world, at a more practical level it is almost impossible to graduate.

Near the start of this article noted a connection made, in 2006, between Politics and IR QAA benchmark statements and the competencies identified in a respected information literacy framework. Repeating the exercise over a decade later, it is noticeable the links between the QAA statements and the ~~s~~Seven p~~P~~illars ~~framework~~ model (both updated) have become even deeper (SCONUL 2011; QAA 2015). Of the eleven 'typical standard' generic intellectual and transferable skills the QAA expects graduates of the discipline to be able to perform, fully five now embrace explicit information literacy competencies, including more that~~with~~ ~~embrace~~include a more~~a~~ ~~n explicit~~ critical dimension~~aspect~~ (QAA~~,~~ 2015: 18-19). These are:

- describe, evaluate and apply different approaches involved in collecting, analysing and presenting political information
- identify issues for political enquiry; assess their ethical implications; and gather, organise and deploy evidence, data and information from a variety of sources
- develop a reasoned argument, synthesise relevant information and exercise critical judgement
- use communication and information technologies for the retrieval, analysis and presentation of information […]
- critique and synthesise information

Other disciplinary benchmarks tell a similar tale (for example, QAA 2016). This article suggests that, as new students arrive through the university door – real or virtual – onto degree programmes, few assumptions can be made about how many steps along the path towards achieving these competences have already been taken. Back in 2006 the original article closed by suggesting that one response to these pressures was to foster closer collaboration between academic staff and information professionals to find the best ways to support students negotiate the increasingly turbulent world of information. Over a decade later this message needs repeating, ~~more~~only louder~~ly~~.

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Tramontini. Early versions of this paper were aired at the ~~Annual~~ Political Studies Association (PSA) 68th Annual International Conference held~~at~~ at Cardiff City Hall ~~University~~, 26-28 ~~in~~ March 2018, and at a Cardiff School of Law and Politics Teaching and Learning Seminar~~, at the same institution,~~ in December 2018, and the author would like to thank the audience at both events for their ~~valuable~~insightful contributions. Finally, ~~the~~he would like to acknowledge the vital contribution made by the editors of LATISS, and the anonymous reviewers called upon to dispense their constructive advice, ~~to~~in getting this paper into a state trim and fit for publication.

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