

Challenges and opportunities for teaching data and statistics within journalism education in Saudi Arabia: fostering new capabilities in the region

Fisal Alaqil, King Saud University, Saudi Arabia, University of Leeds, UK, Jairo Lugo-Ocando, Northwestern University in Qatar

Abstract

This paper explores the nature and reach of the education of data and statistics in media and journalism schools in Saudi Arabia. It allows us to better understand the role of these schools - and the syllabuses set by them - to foster greater capabilities among future journalists and provide them with the tools to engage and work in an environment which increasingly uses more data. The purpose of this study therefore is to understand whether the Saudi educational system successfully prepares media and journalism students with the ability to gather, engage, use, interpret, analyse and manage statistics and data. In so doing, it assesses how journalism education provides, or does not provide, journalists with the ability to fulfil the professional normative expectations of bringing accountability and transparency to public policy and soci-

ety as a whole. To do this, the study uses the example of financial journalism as an opportunity to examine these issues. The piece is based on the triangulation of several qualitative methods. The overall data suggests that, contrary to common assumptions that claim exceptionalism, Saudi Arabia - despite its political system and cultural/religious context - tends to follow similar approaches and normative aspirations as its counterparts in Western liberal democracies. Furthermore, Saudi Arabia has also developed a very similar rationale for justifying the teaching of data and statistics to future journalists in these schools, even if this remains just at the normative aspirational level.

Keywords: Data; education; journalism; media schools; Saudi Arabia; statistics.

Introduction

As in other parts of the world, journalism education in Saudi Arabia is facing important challenges, derived from a combination of factors.

These challenges are a direct result of a set of important changes in the media landscape that are eroding the ability of traditional media outlets to hire news people on the same scale as they have in the past. There are also trends that are shifting the industry as a whole towards a series of new operational and market pathways.

These changes in the media industry are underpinned, among other issues, by technological changes, the fragmentation of audiences, declining advertisement revenue and important transformations in the patterns of consumption related to the media (Lugo-Ocando, 2015, p. 371). On top of all this there is a profound process of individualisation and depoliticisation taking place that sees citizens less engaged with, and committed to, participation in public life (Lugo-Ocando, 2015, p. 374).

However, one of the most important changes in relation to these challenges relates to the way 'datification' is irremediably transforming our entire society (Carillo, 2017; Saracino, 2017) and how this reflects the larger trend of mathematisation in which everything in society seemingly needs to be counted and measured in order to register in the public imagination as a legitimate topic for debate (Martišius and Martišius, 2008; Nikolakaki, 2010). For journalists and prospective journalists, this challenge is rapidly translating into very tangible and timely demands for skills related to data gathering (mining), statistical awareness, data visualisation and the ability to generally analyse and communicate this data.

Indeed, beyond any formal criticism that we might make against this process, the fact remains that it is now at the centre of journalism, which is rapidly redefining itself as a profession that deals with Big Data (Borges-Rey, 2016; Anderson, 2018). It is in this context that the teaching of statistics and data has started to register as a priority among many schools of journalism around the world. Furthermore, it sees this particular branch of knowledge and expertise, which is able to evolve with the field, as a possible pathway to be a viable and sustainable subject area in times of rapid change (Nguyen and Lugo-Ocando, 2016; Lugo-Ocando, 2017).

In this sense, this study aims to explore the nature and reach of the education in data and statistics provided at media and journalism schools in Saudi Arabia. It allows for a better understanding of how these schools equip, or do not equip, future journalists with the tools they need to engage and work with an increasingly

datified news environment. The purpose of this paper is to understand whether the education system sufficiently prepares media and journalism students in Saudi Arabia to gather, engage, use, interpret, analyse and manage statistics. In so doing, it assesses the extent to which this branch of journalism education provides journalists with the capabilities necessary to fulfil the professional normative expectations of bringing about accountability and transparency to public policy in general and the business markets in particular.

This study is based on the triangulation of several qualitative methods. These included semi-structured interviews with heads of media and journalism schools and practising journalists to explore their perceptions of and approaches towards the necessary knowledge and skills in relation to using data and statistics. This was followed by an examination of the curricula and syllabi used in Saudi universities teaching journalism. The overall data suggest that, contrary to common assumptions that claim exceptionalism, Saudi Arabia's journalism schools—despite operating within a particular political system and cultural/religious context—not only tend to follow similar normative approaches and aspirations as do their counterparts in Western liberal democracies but have also developed a very similar rationale to justify the teaching of data and statistics to aspiring journalists.

The broad context

Journalism education and its curricula from around the world has been, for many decades, under close scrutiny and continued revision (Franklin and Mensing, 2011). However, one of the key aspects where there has been some agreement is in the need to provide particular skills and knowledge related to the gathering, production and dissemination of news content. According to Weiss and Retis-Rivas (2018, p. 2), “journalism schools have an obligation to provide the latest skills and techniques to make students competitive for the news market”. Although there is still ample debate around what type of skills should be incorporated into the syllabus, there seems to be increasing consensus around specific knowledge areas that should be included - particularly those relating to the liberal arts (Deuze, 2006; Banda, 2013; Zelizer, 2017).

However, data and statistics, at least until recently, did not register as part of that consensus, despite important debates and initiatives dating back to the 1970s contending the importance of such study areas. There were discussions about ‘Precision Journalism’, which saw the need to incorporate quantitative approaches from the field of social science into news reporting (McCombs et al., 1981; Dennis et al., 2002; Meyer, 2002). Furthermore, not even the UNESCO proposal for a universal syllabus, which gathered important voices from around the world, managed to acknowledge this need (Banda, 2013).

Nevertheless, this situation is changing, and already a growing body of literature has identified the need to teach data journalism at a higher education level in J-school (DeFleur and Davenport, 1993; Yarnall et al., 2008; Berret and Phillips, 2016; Griffin and Dunwoody, 2016; Nguyen and Lugo-Ocando, 2016; Gotlieb et al., 2017). Moreover, the Poynter Institute for Media Studies, one of the most influential in this area, now considers numeracy as one of ten basic competencies for journalists and states “journalists need math skills to make sense of numbers the way they need language skills to make sense of words” (Poynter Institute, 1998, p. 8). Without doubt, the Poynter Institute (1998, p. 8) considers statistics as one of ten basic competencies for journalists while others have made important calls to strengthen the teaching of statistics for media and journalism students (Yarnall et al., 2008; Nguyen and Lugo-Ocando, 2016; Griffin and Dunwoody, 2016).

Maier (2002), for example, highlighted that the misuse of numbers in professional practice has roots in journalism education. Hence, journalism schools need to provide their students with the intellectual tools and abilities they need to access and understand these numbers, as a lack of statistical reasoning remains a major obstacle (Utts, 2003) and will probably continue to do so until media houses and educational institutions begin to focus their attention on solving it (Brand, 2008).

Beyond the West

These challenges, however, are not restricted to the West. Arab countries face similar obstacles to the point that some scholars have argued that shortcomings in media and journalism education are a major issue facing Arab journalism (AlHroub, 2012; AlHumood, 2014; AlHumood et al., 2016; Babaker, 2014; Ibnrubbian, 2016). As such, a study by Hussain (2008) looked into the quality of education and academic accreditation in general as obstacles facing government-provided media education at Arab universities, despite the many key resources that were made available to them in the recent past.

Hussain (2008), who conducted one of the few studies that has been done in this area, found that media education at these universities, especially in the Arabian Gulf, face important academic shortcomings and

organisational challenges. He added that these obstacles hindered the chance to improve the quality of media education and reflect on its outcomes. The main challenge is the inability of these universities to keep up with the modern media revolution. They cannot catch up with their counterparts in the Western world, especially in the areas of media knowledge, media practice and the establishment of new media outlets relating to the information revolution (Hussain, 2008).

Furthermore, authors such as El-Nawawy (2007) found an important gap between journalism practice needs and journalism education provision in Arab countries. This is because media schools in some of these countries do not seem to have a clear vision or specific description of what should be taught and delivered, particularly in the absence of clear academic norms and agreement as to how universities should teach students and lead them to become successful journalists (Alheezan, 2007). As a result, calls have been made from public and media organisations to improve the outcomes of media schools in the region (Babaker, 2014), and while some are embracing these recommendations at a greater pace than are others, in some cases these schools muse face both old and new obstacles within their limited realms of freedom (Al-Hasani, 2010).

However, and perhaps more important to note, is the fact that media education in the Arab world is not linked to a particular theory nor does it manage to translate a particular school of thought in behavioural or social sciences into its own particular setting (AlJammal, 2004), as is the case in other places in the world. Instead, the overall theoretical framework in Arab countries often derives from a Western heritage - as many local frameworks have been excluded for a variety of reasons - and is deeply rooted in the epistemology generated by colonialism, which was subsequently shaped by the tensions of the Cold War.

Consequently, academic institutions delivering journalism education in the Arab world have improvised many of their pedagogical provisions without these being preceded or accompanied by a study of the needs of their societies. Further, they have not incorporated their own heritage and critical traditions, as has occurred in other countries in the southern hemisphere (e.g., the Philippines and in several countries in Latin America, which have developed important alternative models and approaches towards media and journalism education since the 1960s (Beltrán and de Cardona, 1980; Quebral, 1988; Barbero, 1993).

In addition to these gaps, it is important to highlight that there is little tradition in the Arab Gulf of more critical approaches being taken in journalism studies. This includes, incorporating skills that improve the ability of future journalists to bring about more transparency and accountability in their societies.

In this context, El-Nawawy (2007, p. 81) found that many journalism educators and journalism practitioners did not believe in the importance of knowledge of statistics as a competency for journalists. Furthermore, there has been little to no research published to this day about educating and training journalists in the region to develop critical thinking and practical skills related to the engagement with and use of statistics and data. Only a few books from Arab authors have been published with regards to this topic, and these mostly focus on the practical aspects (Aliraqi, 2016) rather than on the critical aspects of this issue. It is precisely here that this paper intends to start a debate that will hopefully trigger further research and discussion on the topic. This last point is particularly pertinent in relation to countries such as Saudi Arabia that are facing important challenges and undergoing great transformations.

Journalism education in Saudi Arabia

Journalism education in Saudi Arabia is, relative to Western countries such as the US, a new endeavour. It only emerged as a discipline in 1972, when the first school of media was established at King Saudi University. This was followed by three more schools: King Abdul-Aziz University (KAU) in 1976, Al-Imam Mohammed Ibn Saud Islamic University (IMAMU) in 1981 and Umm Al-Qura University (UQU) in 1984, (Alhabib, 2007). However, during the last ten years, this number has increased to 14 in total (Ministry of Education, 2018b). Today, there are currently more than 27,000 students undertaking undergraduate studies in media, with almost 800 studying at a postgraduate level in this discipline (Ministry of Education, 2018a). They all undertake education at higher education institutions and all media schools operate in government-run institutions.

Alheezan (2007) is one of the few authors to explore media education in Saudi Arabia. He found that the curricula studied at Saudi media schools are very similar to each other and focus more on general curricula than do US media schools, which concentrate more on specific curricula. More importantly, Alheezan (2007) found that statistics were taught in only one Saudi media school, although quantitative methods associated with media research were taught in all schools (Alheezan, 2007).

However, Alheezan's (2007) study was conducted a decade ago, when there were only eight universities and four Saudi media schools. Therefore, because of the significant increase in the number of media schools

and the political changes and transitions taking place in Saudi Arabia, it is important to re-examine and expand our knowledge regarding the curricula taught in these schools and analyse present and future challenges, particularly in relation to the use of statistics and data.

More recently, Alomir (2016) examined the experience of teaching statistics in Saudi universities. According to his research, the majority of those who teach statistics courses for non-specialist students at Saudi universities, are not themselves specialist in teaching statistics (Alomir, 2016, p. 165). This highlights, in my view, the lack of training and resources in this area. Moreover, he found that: “most statistics teachers adopt a lecturing approach in teaching statistics courses to non-specialist students in Saudi universities despite evidence-based recommendations from a diversity of pedagogical bodies to use instead student-centred and interactive methods of teaching at universities” (Alomir, 2016, p. 174).

Another important finding of his study was that many students in several colleges found statistics courses ‘irrelevant’ to what they aspire to be, professionally speaking, and this in itself has created problems in terms of students’ pedagogical engagement with this type of knowledge and skills in the classroom. As a consequence, according to this author, “the issue has exacerbated a distinct lack of enthusiasm among the students towards undertaking statistics as a course. This lack of enthusiasm caused further difficulties for the statistics teachers dealing with many absent students and groups of unmotivated students” (Alomir, 2016, p. 176).

Although students are still relatively new to this specific area, there are already important elements in place to help determine the key gaps and areas that need further research. One, of course, is a general update in the inventory of resources and experiences related to the delivery of this subject. Another is the need to examine the particular elements that drive J-schools to modernise and adapt their curricula to the demands of the 21st century. This is precisely the task I attempt to undertake in this study.

Methodology

This study is based on the triangulation of several qualitative methods. These included semi-structured interviews with two different groups. The first group of interviews was carried out with eight heads of media and journalism schools to explore their perceptions of and approaches towards providing knowledge and skills in relation to the use of data and statistics. The second group was made up of ten journalists and editors who cover the business newsbeat. They allowed us to examine their levels of education, preparation and knowledge in relation to the use of statistical data, while exploring their perceptions of media and journalism schools in Saudi Arabia.

The interviewees included journalists and editors from three Saudi newspapers: Alriyadh, Aleqtisadiah and Asharq Al-Awsat. Altogether, six journalists and four editors were interviewed, seven of whom were male and three, female. The interviews explored their perceptions about statistical education in media and journalism schools in Saudi Arabia. Their identities have been anonymised following the recommendation of the Ethical Committee at the University of Leeds. Although I recognise that, this number of interviews might seem small, when compared to studies conducted in other regions of the world, I believe that the interviews are not only representative but also insightful, given the current changes taking place in Saudi Arabian society.

These interviews were followed up by a survey examining the curricula and syllabi at all Saudi universities teaching journalism. All these methods were conducted between April and July of 2018. The triangulation of methods followed similar work undertaken by other authors in the field (Dunwoody and Griffin, 2013; Nguyen and Lugo-Ocando, 2016; Splendore et al., 2016; Martin, 2017) who explored journalism education related to the use of statistics by journalists.

Findings and discussion

Overall, the findings indicate that, contrary to common assumptions that claim exceptionalism for Saudi Arabia’s journalism education system (given its political system and cultural/religious context), journalism education in the country tends instead to follow similar approaches and normative aspirations to those of their counterparts that operate in the context of traditional Western liberal democracies. The findings also suggest that these media and journalism schools have developed a very similar rationale for justifying the teaching of data and statistics to future journalists in these schools.

Furthermore, heads of Saudi media schools seem to be very aware of the importance of and need to engage with data and statistics to improve the transparency and accountability of governments in modern society.

Indeed, most heads of schools interviewed thought that these skills are crucial to improve transparency and efficiency in public policy design, its implementation and, more broadly, the decision-making process. As one of the interviewees mentioned:

“There is no doubt that the availability of statistical information, whether economic or social, would have helped the decision-making process Therefore, any decision taken by an institution must be based on statistical information, and the more accurate the information, the closer the decision will be to the truth. (#INT15)

In fact, these heads of school saw statistics as a central element in business news stories. According to one of the heads:

“There is no doubt that the economic press relies heavily on the language of numbers where data and statistics are at the heart of the financial press and through which the full picture of the event will become clear and highlight the places of interest. The statistics are indispensable in the news, reports, and investigative journalism. It constitutes a cornerstone of the success of the specialised article and the fullness of its content. (#INT17)

Another head of a media and journalism school confirmed this view with the following argument:

Certainly, financial and economic journalism is mainly based on figures and statistics. The economic issues related to the movement of capital, inflation, the stock exchange ... shares, bonds and other financial instruments all depend on data, statistics and figures. (#INT16)

These findings further support the idea of Vollmer (2016), who argued that business numbers represent an important aspect of constructing economic reality - an idea that is widely accepted in economic discourse.

Equally important for these heads of media schools is the role that statistics and data play as tools to enhance a newspaper's ability to bring about improved transparency, accessibility and engagement in relation to the public (Utt and Pasternak, 2000; Bekhit, 2009). One of the heads of media schools pointed out the following:

“[Statistics help] the reader to understand huge amounts of information quickly. In my opinion, infographics help journalists move from plain text to visual content and thus help the reader to understand numbers and statistics faster and easier than plain text. ... [R]eaders get bored by plain text news, especially longer articles, whilst they find news that includes infographics more attractive. Therefore, the press would help itself a lot if it made more use of infographics. (#INT18)

Some of the heads interviewed, who believe in the significance of teaching statistics for business journalists, tried to diagnose the current situation, not only by acknowledging the lack of provisions in their own institutions but also by highlighting the gaps in the news organisations themselves. These heads mentioned, for example, the need to develop within news organisations information centres and/or the provision of specialised knowledge that could help news media outlets to process and analyse data with greater effectiveness:

The lack of advanced information provisions and support makes it challenging for journalists to obtain information within their pressing deadlines or when an editor requests information at short notice. If these centres existed within news organisations, they would be able to provide the information needed. (#INT18)

This echoes similar claims made in the West by journalists who complained about the lack of options available to them in getting support to access and analyse business numbers (Doyle, 2006; Manning, 2013). As one school head argued:

Of course [statistics] are very important. However, the problem is that the economic press does not have research facilities or resources within the organisation to help [journalists] gather and access statistics and support them in dealing with these numbers in order to disseminate them among the public. Apparently, the press in the Arab world as a whole does not rely on statistics and studies. In fact, there is supposed to be a reliance on statistics to guide public opinion, and if you look in the newspapers, you will not find any reference to statistics or research centres. (#INT22)

However, other heads of schools think that teaching statistics in their courses will only help a small and specialised cohort of professionals within news organisations, thereby illustrating the limited impact of these efforts in relation to employability and transferable skills. These voices also raised concerns about the limited impact of learning statistics on the wider public:

It can be useful [to teach statistics] to those who think they can benefit from it or who are interested in numbers. However, I do not think it benefits the wider public or the ordinary reader because what these numbers are about does not concern them at all. (#INT21)

Despite this disagreement among some heads of media schools, the views that teaching statistics is not necessary was only held by a few of those interviewed. The vast majority of the heads of school of media and journalism interviewed believed instead that teaching statistics is crucial. One of the heads of media and journalism schools interviewed mentioned:

"I believe that the teaching of statistics to media and journalism students is very important and crucial, although many of the media departments in the Kingdom do not include a special course for statistics. In my opinion, I think this is a mistake and that failing to teach statistics is not the right path to follow. I believe that the teaching of the principles of statistics for undergraduate students is necessary. As for master's students, their studies depend on statistics so they must have a course in statistics, especially because they also have a course in research methods, which in turn depends on statistics, particularly in the quantitative aspect." (#INT15)

Another head of a media and journalism school interviewed explained the significance of applying the teaching of statistics to journalism students in a theoretical and practical way:

"It is very important to teach statistics to media students, especially as they develop their skills and knowledge in multi-variable analysis and knowledge to understand and apply statistical standards and tests in the public opinion survey. They also play an important role in analysing the statistical data needed for reporting and investigative reporting. It also helps them to conduct studies and media research, especially quantitative ones, which are based mainly on the employment of statistical transactions." (#INT16)

In fact, one of the heads of media schools went further in explaining the significance of teaching statistics to media students and how it is important to develop statistical education for students of media and journalism.

"I think it is a very important course.... Media professionals in many Arab newspapers are not able to use the information and turn the figures into a newspaper article. And we, in the media department, have statistics as an obligatory course and believe this is important, and we also added a course on basic science -physics, chemistry and biology. Whilst this may be a burden to some students, we believe in the importance of educating them in the fundamentals of media and science so that they have the basic knowledge and skills needed to handle scientific subjects when they encounter them or wish to discuss them. Students need these qualifications to keep pace with the evolution of the press. Also, we in the media department, are keen to reflect modern trends in our curricula.... In the new direction, we try to adopt this approach through our curricula. In short, we are trying to become a digital technology department." (#INT18)

Data from the ground

In addition to the heads of schools' perceptions about the teaching of statistics, I also examined evidence from the documents related to current journalism courses offered at Saudi Arabia schools by surveying their syllabi. One of the key findings was that all students are, in fact, taught -at some level and in some sort of way- statistics during their undergraduate degree. However, the way in which they are taught is different to what one might expect and varies according to each school and department (see Table 1 below).

In the majority of these schools, statistics is taught as a compulsory course of the university or the college. On other occasions, statistics is taught as part of the syllabus of research methods courses or integrated into basic science courses. Only in a minority of cases, statistics taught as a course option in itself, with a specialised emphasis within the schools' curricula.

In contrast to earlier studies (Alheezan, 2007; Alhabib, 2007), which found a real lack of statistical pedagogical provision in Saudi J-schools, the current results show instead far greater and more comprehensive options. This result may be explained by the increase in the number of J-Schools from only four when the previous studies were conducted to 14 schools at the present time (Ministry of Education, 2018b). Another possible explanation is that there has been a global increase in the provision of data and statistics education within media and journalism courses overall (Treadwell et al., 2016); a trend that might have motivated higher education institutions in the southern hemisphere to follow suit.

However, most of these J-schools do not offer specialised statistical courses that are designed particularly for media and journalism students. Instead, some teach just the basics of statistics and how to use statistical software (mainly SPSS), even among those who deliver these courses within their own curricula and not as part of wider provisions of the university. In other words, in most cases there are no courses, that take into account the needs and expectations of this particular field (i.e., being far more instrumental in helping journalists use statistics to carry out investigative reporting, analyse polls, etc.).

Some heads of schools interviewed thought that the current offerings are far from sufficient and believe that just providing basic statistics skills and knowledge is not enough for their students if the purpose is to prepare them well for the future. As one of them said:

"[T]here is a general course of statistics that is mandatory, but it does not meet the needs of media students because it is taught in general terms and not in depth regarding its application to the analysis they will need to carry out as professionals." (#INT20)

These voices are not surprising and are not only present in Saudi Arabia. As Franklin and Mensing (2011)

pointed out this view and position is very present in many J-schools around the world:

One of the criticisms of established newsrooms and journalism education programs is that they can be rigid and resistant to significant change. Defending the values of journalism can be conflated with defending the practices of journalism. Academic processes can be startlingly unresponsive to external needs. However, the scale of change and the need for revised curriculum and educational methods is now so stark in some places that the impetus is sufficient to open up new possibilities for reconfiguration. Journalism education programs can take this opportunity to remake themselves into learning organizations, communities of practice or other structures that foster the innovation and responsiveness necessary for future success. As universities find themselves under increasing pressure to update their own practices and relevance, journalism programs could be well positioned to become leaders by virtue of necessity. (Franklin and Mensing, 2011, p. 6)

Another head went on to explain why it is not enough to teach statistics as a compulsory course of the university or college:

[I]t does not meet the needs of media students. This is because there are different disciplines in statistics... The basis of statistics in our department is the use of statistics in research and media studies with a focus on the principles of descriptive and applied statistics, and variables and attributes separate from other types of statistics that have nothing to do with the study of journalism and media. (#INT16)

However, not all heads of schools are on board with this and many thought that the existing 'general' provision is more than sufficient to deal with the needs and expectations of the media industry and the journalistic profession. This point was clearly illustrated by one of the heads, who said that he did not believe in teaching statistics as a specialised course within the school's curricula:

Teaching statistics actually exists in the bachelor's degree as a university requirement and exists within the curriculum of the research methods in the Department of Media as well... However, I do not recommend creating an independent course of statistics for the bachelor's degree programme. A student wishing to study advanced statistics can select this course as an optional or free subject. (#INT17)

An analysis of the feedback gathered from some the interviewees revealed that their own views on whether there is a need for specialised courses are perhaps anchored in their belief that managing statistics is a subject that they themselves can teach and perform. Indeed, for the majority of heads of schools interviewed, the limitations in the teaching of statistics within schools' curricula are not due to issues related to human resources; many held the view that "this has nothing to do with the lack of qualified faculty to teach this course" (#INT15).

This view was shared by most of the heads of schools interviewed. In fact, only one of them saw human resources as a key pedagogical limitation. In this sense, the interviewee pinpointed the following:

There is already a shortage of faculty members specialised in the field of media statistics, so we may resort to relying on faculty members of associated disciplines such as sociology and psychology. (#INT17)

Ten journalists and news editors cover the business newsbeat at three Saudi newspapers (Alriyadh, Aleqtisadiyah, and Asharq Al-Awsat). This group, all of whom were interviewed in the current study, included six journalists and four editors, seven of whom were male and three female. The interviewees were selected from those journalists and news editors who covered the Global Financial Crisis of 2008 to explore their own experiences in dealing with statistics during taht events and to determine how education could have enhanced their own capabilities.

The data suggests in this case that none of the journalists and editors interviewed agreed that Saudi universities prepare students of media and journalism to work with statistics. On the contrary, their own personal experience, plus their experience in working with others, has led them to recognise the existing gaps in the teaching of specialised knowledge related to statistics. As one editor explained when asked how much specialised statistical education he/she had received:

Zero. To the best of my knowledge, Saudi universities have not yet provided any link between statistics and the economic press in their curricula. However, there are individual efforts and personal judgments from some bodies such as foreign media institutions or local institutes. (#INT01)

This view coincides with a number of studies, which have found that teaching students of media and journalism schools in the Arab world does not necessarily prepare them for the real world; they warn that students are ill-prepared to perform well as part of the media's workforce when they graduate (El-Nawawy, 2007; Saleh, 2011; Tahat et al., 2017).

Another editor touched on the debate around business and other specialised types of journalism. This refers to the question of whether it is better to appoint journalism/media graduates and then to provide financial courses for them, or whether it is better to hire financial graduates and then provide media courses for them:

There are many theories that speak about this aspect. Are we supposed to employ media graduates in the

economic press after giving them an economic course or economics graduates in the economic press after giving them a media course? Local and international experiences combine both. But from my point of view, the person working in the economic press is one who is capable of developing themselves to understand the economics and to be able to read economic figures and reports. Saudi universities are a long way off from reading the economic scene. (#INT03)

This, in fact, echoes previous discussions in academia, such as that put forth by Weiss and Retis-Rivas (2018, p. 11), who highlighted that: “when journalism students nowadays are required to learn the latest skills in digital, social and multimedia technology, the focus on data journalism could be an afterthought and just not make the list of courses they need to take before they graduate”. This idea was expanded on by another of the interviewees, who stated the following:

Based on my experience, I found the first newspaper where I worked depended on economic, finance and management graduates, and their experience was largely based on their academic record and the number of accounting and financial courses they completed. It is difficult to find a student specialised in media and train them in statistics, economics and finance to work in a newspaper specialising in money and economics, whereas it is easier to train graduates of economics, finance, accounting and statistics on the editing of media. From my point of view, I think the university has many shortcomings, from teaching how to read ratios to teaching how to deal with the Excel programme. (#INT02)

Another interviewee confirmed this view, clarifying the following:

I am a journalist and I have a BA, but I did two years of practical training in a newspaper, and I think this training is what made me a journalist. I found that the university gave me the theoretical side, but I was only trained by the newspaper to be a journalist and the university has nothing to do with it. (#INT04)

It is perhaps important to clarify in relation to this discussion that only half of the interviewees held a BA degree, with only two holding a degree in journalism-related field -one in media and journalism and another in public relations. The remainder of those interviewed working in this beat who had a BA degree graduated instead from disciplines such as banking and financial science, management and economy, and sociology. More interestingly, while the vast majority believed that training would be very helpful, the majority of those had not actually undertaken any training. In addition, all of those who graduated did so at least ten years ago or more, so their views might only reflect the previous setting of the media and journalism education landscape.

In any case, these findings suggest that there is an important gap between what the media industry expects and claims to need from new graduates and the knowledge and skills on offer. This is not a problem exclusive to Saudi Arabia or even to the Arab world as a whole. It is, in fact, a more global problem that has been widely recognised and debated in many forums and conferences around the world.

Conclusion

The overall data presented in this study suggest that, contrary to common assumptions that claim exceptionalism, Saudi Arabia’s J-schools -despite the political system and cultural context in which they operate- tend instead not only to face similar challenges to those faced by their counterparts in Western liberal democracies but also to follow similar approaches and normative aspirations in relation to the teaching of statistics and data to journalists.

This is not to say that I am somehow equating the journalism education provided in a Western liberal setting with that taking place in Saudi Arabia; I rather seek to pinpoint that some of the similar challenges and limitations might have grounds for common actions and responses. In other words, based on my data, I suggest that, far from dismissing Saudi Arabia’s journalism education attempts to modernise in the past few years, we should instead recognise them as part of the important transformations taking place in that region.

It is clear from this research that there is awareness and expectation among journalism educators and practitioners that more transparency and accountability must be brought to their own societies. One of the ways to achieve this, it seems, is to develop particular provisions that can deliver critical knowledge and skill sets related to the use of data and statistics in news reporting.

Although my study is limited to the business newsbeats, it is possible to see that there are other areas that have similar experiences and views. The teaching of data and statistics to journalism students is, in fact, a shared need across all areas of journalism, not only in terms of providing transferable skills to increase employability among these students but also –and more importantly- as part of orchestrated efforts to support the changes taking place in the region and to allow journalism to make an effective contribution to the enhancement of transparency and accountability in the society.

In this sense, I argue that it is necessary to understand these educational efforts as part of a wider approach to building ‘capabilities’ in the region –an approach that refers to a framework that allows interventional

efforts from educational organisations to provide the means to fostering the wellbeing of primary moral importance. According to this view, these capabilities exist to offer real opportunities for individuals to do and be what they have reason to value most (Nussbaum, 2001; Sen, 2002). In other words, the efforts to teach statistics and data in Saudi Arabia's J-schools need to be contextualised within more global educational efforts to offer knowledge and particular skills that can help individuals and communities advance transformational agendas for the benefit of society at large. That is, I think, our true challenge.

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#	University name	College name	Department name	Teaching statistics for undergraduates:		
				... as a specialised course	... within a different course	... as a compulsory course
1	King Saud University	Art	Mass Communication			1
2	King Abdul-Aziz University	Communication and Media	Journalism		Research Methods	1
3	Al-Imam Muhammad Ibn Saud Islamic University	Media and Communication	Journalism and Electronic Publishing	1		
4	Umm Al-Qura University	Social Sciences	Mass Communication		Research Methods	1
5	Taibah University	Art and Humanities	Communication and media		Research Methods	
6	Islamic University of Madina	Da'wa „Islamic Call“ and Fundamental of Religion	Media			1
7	King Khalid University	Humanities	Media and Communication	1	Science	
8	Imam Abdulrahman Bin Faisal University	Art	Communication and Information Technology			1

Table 1: The current status of teaching statistics in Saudi media and journalism schools.