# Hosting a successful metamodern party: mixed methods management research on the Web 2.0+

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## ABSTRACT

There is an academic consensus that mixed methods designs can help overcome the inherent limitations of single method protocols because they simultaneously provide data depth and breadth whilst safeguarding generalizability and transferability of results. Still, their use in academic research remains limited due to the high costs involved. We hereby propose that a large part of the resource restrictions can be reduced by using the internet for sampling and data collection.

As an example, we offer our study of the consumer-based brand equity of celebrity footballers, for which we employed an exploratory sequential mixed-method design combining on line sampling, focus group participant recruitment and quantitative data collection with traditional focus groups.

We provide checklists and practical tips for selecting and designing data collection platforms, managing research ethics and applying research promotion strategies. We demonstrate that online research increases rather than sacrifices data quality. We argue for the necessity of combined on and offline mixed methods management research enriched with state-of-the-art technology developed by businesses.

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Moreover, we offer industry an academically sound testing of their digital marketing practices. Finally, we explore the effect of aligning academic research with the realities of the web2.0+ lived experience on the academics' role identity.

## Introduction

Three decades ago McGrath (1981) stressed that "a single observation is not science" (p.191) and amply demonstrated that all research methods are inherently incomplete and fraught with often fatal imperfections. He offered methodological pluralism - "bowling [dilemmas] over with multiple methods … embedded in multiple designs, using multiple strategies" (p. 209) "selected from different classes of methods with different vulnerabilities" (p. 207) - as the solution for transcending methodological vulnerabilities, maximising the theoretical and practical desiderata and capturing the nuances of rich data.

Mixed methods designs, in which qualitative and quantitative techniques complement and enhance each other, can help overcome the inherent limitations of quantitative and qualitative methods because they simultaneously provide data depth and breadth whilst safeguarding generalizability and transferability of results (Hesse-Biber & Leavy, 2008; Johnson, Onwuegbuzie, & Turner, 2007). Moreover, multiple methods and sources of data minimise the danger of common method variance (the "variance that is attributable to the measurement method rather than to the construct of interest") which is a concern in approximately 41% of attitude measures (Podsakoff, MacKenzie, Jeong-Yeon, & Podsakoff, 2003, p. 879). Finally, they enhance triangulation as they allow for findings to be cross-checked (Bryman & Bell, 2007).

Despite their having been found to work well for many disciplines (Hewson, 2008), especially those that are naturally "multifaceted [and] crossing national, cultural, organizational, and personal boundaries" (Sedoglavich, Akoorie, & Pavlovich, 2015, p. 257), and their increasing popularity (Bryman & Bell, 2007; Cui, Zhou, & Liu, 2015; Hesse-Biber & Leavy, 2008; Hewson, 2008), they account for only 4-9% of the total business literature (Harrison, 2013). One of the main reasons for their limited use is cost (Kemper, Stringfield, & Teddlie, 2003). In this chapter, we propose that a large part of the resource restrictions (such as limited time and funds or scarcity of equipment and competent data collectors) plaguing traditional mixed methods research designs can be reduced by using the internet for qualitative research sampling and quantitative data collection. We demonstrate that online research increases rather than sacrifices reliability, validity and generalisability on the altar of cost-efficiency.

Practicalities, however, are but a small and rather mundane part of the necessity for management scholars to explore novel methodological approaches. It is the emergent reality of the twenty first century world that forces us to re-examine both our tools, attitudes and identities. The understanding that complex interactions of multiple stakeholders over boundary spanning networks cause time-delayed effects that cannot be solved analytically by applying deterministic linear models is not new (Lutha & Virtanen, 1996). From applications of chaos theory (Arnaboldi, Lapsley, &

Steccolini, 2015; Murphy, 1996) to various management problems we also know that the qualitative properties of dynamic systems cannot be captured by the cross-sectional data collection techniques of modernity. Everyday universal experiences, such as consumption, for example, have been demonstrated to be "so diverse, variable,… esoteric, … and dependent on the specific nexus of the person, the object and the context as to be rendered totally immaterial and thus, incommensurable to modelling … by the tools [used in] the modern and post-modern milieu" (Panigyrakis & Zarkada, 2014a, p. 18).

Mixed methods designs - by virtue of their inherent dynamism, decentralization, multiplicity and multifacetedness - not only control for the context of management practice of the 21st century identified in Panigyrakis & Zarkada (2014a, 2014b), namely the remnants of the hyperreality, fragmentation and juxtaposition of opposites that characterised postmodernity, but also transcend the fluidity of personal and communal identities and the brutal sociocultural restructuring that comes with the transition to metamodernity. Quantitative methods alone cannot detect (Baudrillard, 1988)'s 'fantastic cages' of consumption or what Lacan described as the powerful images that reside between language and the unconscious, feed desire for the sake of desire (Sharpe, 2005) and form the bases of Sternberg's (1995) 'iconic capitalism'. At the same time, qualitative methods alone can only capture valuable but largely ungeneralisable subjectivities thus limiting the resulting theories' practical applicability in a globalised economy consisting of billions of interconnected consumers, entrepreneurs and employees and millions of interacting organisations, institutions and markets.

Metamodern socioeconomic phenomena, however, take place in the yet largely uncharted territories of the Web 2.0+ as much, if not more, than they do in the physical world. Cyberspace, Augmented and Virtual Reality experiences are actually real their partakers. Space and time are reconfigured and the loci and nature of communications between people and organisations are shifting. The one-way controlled transmissions of information over broadcast media of modernity have evolved into incontrollable multi-party conversations over Online Social Media Networks. Content, experiences and emotions are Posted, Shared, Liked, and Commented upon alongside organisational communications. It is thus obvious that the internet is fast becoming the single largest and most readily accessible repository of "digital life stories, an invaluable database of socio-demographics, opinions, needs, desires, values, grievances and hates" (Zarkada & Polydorou, 2013, p. 108). New collective identities emerge, old ones are renegotiated, reputations and brands that had been carefully crafted over decades are deconstructed, virtual teams replace hierarchies and remote work is becoming the norm, e-commerce volumes increase and even governments invite online bids to public auctions. It follows that management researchers need to be where their subjects are: in the largest ever village square.

Indeed, the 3.7 billion most affluent, educated and influential people in the world (that is 89% of the North American, 74% of the European and 73% of the Australian and Oceanian population) meet daily online (Internet World Stats, 2016) and interact freely over national, linguistic and psychic barriers. What is more important, they

spend on average 6.6 hours per day living the World Wide Web (web) experience (Kemp, 2016). Even the Japanese and South Koreans, the laggards in internet usage, are online for about 3 hours every day (Kemp, 2016). Internet-based research has for over a decade now been quite popular (Hewson, 2008; Wang & Doong, 2010), mainly because of its time and cost benefits and despite concerns over the quality of the data it yields and its generalizability (Fricker, 2008; Hewson, 2008). Since these concerns were voiced, however, the frame bias concern has been practically eliminated by the rapid adjustment of internet users' demographics to include the over 65 year olds, the poor and the uneducated (Deutskens, de Ruyter, Wetzels, & Oosterveld, 2004; Wang & Doong, 2010). The opposite is actually fast becoming the case: it is the use of traditional media that excludes whole generations who shun print and increasingly switch off broadcast media (Luck & Mathews, 2010), that is, most of GenY, the Millennials and all those whose birth pictures were posted on Facebook and are now old enough to own tablets. It is obvious that internet-based research is a sounder methodological approach to reaching large, dispersed or interest-based populations than pen-and-paper or telephone surveys (Hewson, 2008). After all, the world average of internet users has tripled during the past decade (it reached 43.9% at the end of 2015) while the fixed telephone line subscription rate has declined to the level of 1998 (14.34 %) (International Telecommunication Union, 2016a) and mail volume has been halved (United States Postal Service, 2006). What is more important is that almost 60% of the world's population (Statista, 2016) carry the web in their smart mobile devices with them wherever they go.

In this chapter, we propose that, to understand the 'click and mortar' world that 21st century people and organisations inhabit, and to be able to study, not only the unstructured and multifaceted emergent problems but also the traditional research themes which are being reconstituted by Web 2.0+ technologies and mentalities, management scholars need to be able to reach their subjects both in their physical and their avatar forms using new and exciting methods. We add to the voices (c.f. Hewson, 2008) that call for internet mediated mixed methods research as a solution to overcoming resource constraints. We also argue that these methods serve the purpose of addressing current and future social circumstance efficiently whilst safeguarding data quality by using freely available technologies such as web analytics and e-marketing techniques. We aim to assist the management research community in overcoming the well documented (Harrison, 2013; Harrison & Reilly, 2011) limited familiarity with both mixed method designs and IT functionalities.

As an example, we offer our study of consumer-based brand equity of celebrity footballers (Tzoumaka & Zarkada, 2013, 2016; Zarkada & Tzoumaka, 2015; Zarkada & Tzoumaka, 2014; Zarkada, Tzoumaka, Siomkos, & Panigyrakis, 2014). The inability of traditional methodological approaches to serve consumer culture theory and the organisation-stakeholder meaning cocreation process has been well documented (Panigyrakis & Zarkada, 2014a) so we needed to develop novel approaches for decomplexifying and organising an emergent research area. We applied an exploratory sequential mixed method design. This type of research, despite its advantages, is actually quite rare (Abeza, O'Reilly, Dottori, Séguin, & Nzindukiyimana, 2015; Creswell & Plano Clark, 2011; Harrison & Reilly, 2011). Our study comprised (a)

a short online survey to identify focus group participants, (b) five traditional focus groups meetings in two cities and (c) a complex, quasi-experimental, self-selected web-based questionnaire utilising a one-group post-test protocol (Gaines, Kuklinski, & Quirk, 2007), the closest to pure experimentation (Fricker, 2008). While designing the study, we found very little practical advice regarding applications of state-of-the-art technologies that are popular in business but still rarely used for academic purposes. The following sections present the procedures we developed to cover the gaps in the literature on efficient and effective

- (i) online sampling,
- (ii) participant recruitment and
- (iii) data collection.

We provide checklists with criteria for selecting appropriate techniques and practical tips on how to apply them. Our suggestions are derived as much from our experiences as from our mistakes. Finally, we reflect on how technological innovations affect not only the tools but also their users.

## Managing 21$^{st}$ century management research: the party planners' checklist

The internet is the vastest meeting place the world has ever experienced; a distinct but also deeply enmeshed in the collective global everyday experience social milieu where friends, foes and strangers alike engage in multi-party user controlled meaningful but also silly conversations traces of which are for ever hosted on millions of networked computers all over the world. Management researchers cannot stay out of these conversations that evolve uncontrollably *ad infinitum* thus generating valuable data. Being present, however, is not enough to make sense of the evolving phenomena. Neither is being a wallflower in this "endless party where people invite themselves" (Zarkada & Polydorou, 2013, p. 93).

Management researchers need to become hosts of their own carefully orchestrated data collection parties. Imaginative use of technology can make these parties highly visible and so exciting that people will want to massively attended and bring a nice present: their experiences, feelings and opinions.

### *Online sampling: drawing up the party guest list*

The foremost concern of online sampling is that the research population is actually present and adequately active on the web. Commercial and official sources need to be carefully examined in tandem to avoid errors of coverage. For example, in our study of footballer brand equity the research population was defined as sports fans with an interest in professional soccer. From industry reports we established that percentage of the country's population that have an interest in soccer. To ensure that the internet population characteristics did not differ from the general and the research population we used a combination of data sources such as national statistics, databases compiled by international agencies (International Telecommunication Union, 2016b; Internet World Stats, 2016) and commercial reports (Internet Live Stats, 2014; MediaScope Europe, 2012).

Sampling integrity is maintained by considering the nature of the study in relation to triangulated documentation of habits of the target population. We were seeking the opinions of people on celebrity footballers so we met our subjects in the milieu in which they meet their idols. Greeks spend more time on the web than on any other medium such as television, radio, newspapers or magazines (MediaScope Europe, 2012) and sports fans are the heaviest of all internet users (European Interactive Advertising Association, 2008). Also, sports-related search terms consistently top the national popularity lists (Google, 2016) and sports sites are always amongst the most visited ones (Alexa, 2016). Finally, sports fans are found all over the country so the internet is the fastest and most reliable way of reaching people in remote areas as well as ensuring that they are all approached at the same time and in exactly the same way, something that could not have been guaranteed had we, for example, used pen-and-paper surveys administered by the research team at football stadia and club refectories at immense cost.

## *Participant Recruitment: inviting the guests*

Twenty first century people are playful, easily distracted online community members who multi-task and media mesh at exponentially increasing rates (Luck & Mathews, 2010). Institution-generated messages are generally perceived as "pathetic… not funny… not interesting… not know[ing] who we are or car[ing]" (Hanna, Rohm, & Crittenden, 2011, p. 267). The good party hosts' main objectives are to shine through the media clutter, attract the attention of potential research participants and engage them long enough to collect their valuable data. Marketing practice and advertising theory provide valuable tools for promoting the research.

### **Promotional media selection: choosing how to send the invitations**

In theory, unrestricted self-selected web sampling gives researchers the opportunity to access individuals who are difficult or very costly to locate and reach (Fricker, 2008). In practice, however, the degree to which the opportunity will be taken full advantage of depends on the dissemination medium. The key medium selection criteria and our insights on how to apply them are summarised in Table 1. They are (i) relevance (there is little to be gained by placing a call to participate in a focus group on sports in a cooking magazine), (ii) appeal (as indicated by circulation data), (iii) audience profile (to check for representativeness of the sample), (iv) partisanship (to control for sampling and response biases), data sharing (that is full access to medium usage patterns) and (vi) the cost of placing an advertisement or advertorial (or the effort required to set up a sponsorship agreement).

---------------------------------- *Insert Table 1 about here* ------------------------------

Whilst for print or broadcast media circulation and audience demographic data can be hard to find or unreliable (as they ae provided by the department selling advertising space on the medium), for the online ones, statistics are readily accessible through free (or low cost) website analytics tools such as Alexa.com, siteworthtraffic.com and Similarweb.com. Multiple sources are, again, required to triangulate the medium evaluation data. Siteworthtraffic, for example, shows unique visitors and pageviews per day as well as trends whilst Alexa provides country wide

and global rankings as well as detailed visitor demographics. Further to reliable hard data, qualitative examination of each medium is also required. Open partisanship is a main concern as it automatically excludes those of a different perspective but so are public perceptions of the independence of the medium as they can introduce uncontrollable response bias. Finally, the data needed for medium evaluation are also needed for *a posteriori* sample quality assessment so full access to site traffic analytics needs to be granted to the research team by the site owners throughout the project.

## Research promotion tools: designing the invitations

Traditionally, recruitment for internet-based self-selected surveys is carried out using banner advertisements on web pages (Fricker, 2008). Advances in IT and digital marketing practices, however, have since provided additional alternatives namely Content and Social Media Marketing which have yet to be evaluated in the context of academic research. We here present a comparison of the costs and results of all three techniques which we applied sequentially on the most popular sports medium in the country. First, we run banner ads and then we applied Content and Social Media Marketing techniques in tandem on the same medium. To evaluate the effect of each promotional technique we used data provided by Google Analytics.

The exposure of internet users to banners is usually measured by counting impressions, that is how many times the banner was displayed on users' screens provided by the web site that displays the banner. There several problems with direct placement of banner ads. Impressions count even when the screen is automatically refreshed periodically by the site thus counting the additional impressions on the same user's screen as new impressions. It also cannot differentiate between above and below the fold placement (that is how much of the screen the user actually sees without scrolling which depends on screen size and resolution). Moreover, impressions, as a measure, cannot account for the visitors' using ad blocking software. "Active desktop ad blocker usage has quadrupled globally since 2013, with around 220 million users employing ad-blocking technology today. Consequently, 32% of all page views worldwide are now impacted by ad blocking" (Hancock, 2016, p. 1). For example, in the US 45 million active users do not see website advertisements whilst in the UK the number of ad block users grew by 82% in 12 months (PageFair Team, 2015, p. 1). At the time of data collection, Greece was "leading the way with an average of 24,5% of [the] online populations using adblocking software" (PageFair & Adobe, 2014, p. 7). Finally, there is no way to account for "banner blindness" (Stec, 2015), the fact that over 70% of internet users ignore banner advertising (eMarketer, 2014) and, certain age groups, such as the 18- to 34-year-olds, pay them even less attention than they do to TV, radio and print advertisements (Stec, 2015).

The clickthrough rate (CTR), the ratio of clicks on the banner to the number of total impressions, is another measure of the conversion rate of a banner ad. On a global scale, the average CTR across all formats and placements is 0.06% (Stec, 2015) and researchers can benchmark their placements against the performance of similar advertisements by industry, country, formats, placement and size using free internet

tools such as the Benchmark tool on richmediagallery.com. For our project, we had a three-frame Flash animated medium rectangle (300*250) skyscraper banner (Figure 1) placed to the left sidebar on both the home and the dedicated (football) page. The cost of the ad placement at the time the research was carried out was approximately €10,000 per week. During the one week period that the banner ad was left in place it yielded 1,648,000 impressions, 329 attempts to respond to the survey (a minuscule 0.02% interest rate, below the country average of 6% for same type and size advertising but comparable to the average 3‰ CTR achieved by web banner promotions of academic research) but only 41 fully completed questionnaires (that is a rather small 12% response rate). Thus, the ROI of our banner advertising was unacceptably low as the cost per participant, had we paid for the ad, would have been €243,90.

-------------------------------- *Insert Figure 1 about here* --------------------------------------

Content marketing is based on a *quid pro quo* logic: instead of yelling to attract attention, like you do with advertising, you give something valuable – informative or entertaining content - to get something valuable – attention, clicks, conversions, or in our case, data - in return. Instead of being the irritating commercial you become the exciting show (O'Brien, 2012). The website that first hosted the advertisement, later, featured an interview with a research team member written by a spots journalist. The article (sample shown in Figure 2) discussed a topic that is important to football fans, included information about the research stressing its academic nature and the FIFA funding. It also mentioned that all focus groups participants would enter a draw for a season ticket to their favourite team. We used the same egoistic and altruistic appeals of the banner advertisement as call-to-action in the side-lines and also inserted multiple hyperlinks to our online questionnaire in the text.

In approximately 48 hours the article webpage yielded 8,425 unique page views, 1,351 clicks to the questionnaire (a satisfactory 16% interest rate) and 1,274 completed questionnaires (an amazing 94% response rate). What is most impressive here is the commitment to the research and level of trust the respondents to the screening survey demonstrated. They completed the questionnaire after having read the instructions and accepted the terms of the survey which were (a) to participate in the focus group meetings and (b) to provide full personal data (name, surname, email address and mobile telephone number).

-------------------------------- *Insert Figure 2 about here* --------------------------------------

We also used Content Marketing to promote the survey for the quantitative phase of the research. There were no incentives for filling in the quite long and complex questionnaire but again, the response rate was a very satisfactory 33.4% (much higher than the 10-25% typically reported in Deutskens et al., 2004; Manzo & Burke, 2012; Sánchez-Fernández, Muñoz-Leiva, & Montoro-Ríos, 2012; Sauermann & Roach, 2013). Overall, 87.37% of the traffic on the survey website came from clicks on the links incorporated in the article. Interestingly, 14.45% of those clicks came from the mobile version of the site hosting the article. Finally, about 10% of the

traffic came from sites that reproduced the content. Traffic from the article and its reproductions had a very low bounce rate (17.83%) thus further strengthening the argument for using content marketing to promote research. Having taken the egoistic motive away, we believe that this result strengthens the relevance argument: when people care about the topic they happily give their time and opinions. Upon comparing the results with those of the banner ad we also believe that the article played the role of reducing participants' perceived risks.

The online articles were also pushed through the media group's relevant social media platforms. The leverage for both surveys was poor as only about 2.1‰of the clicks to the focus group screening survey and 2.11% of the clicks on the quantitative study page came from media sponsor's Facebook posts. Moreover, the bounce rate of the Social Media generated traffic was a quite high 48.33%. In our study, Social Media Marketing was supportive of the Content Marketing effort and controlled by the sponsor's marketing personnel so our data is insufficient to fully evaluate its appropriateness for academic purposes.

## Managing incentives: getting the invitation accepted

Offering monetary and quasi-monetary incentives for participation has long been a common practice in qualitative research where extra effort and commitment is required of the participants (Deutskens et al., 2004; Fricker, 2008; Morgan, 1997; Wang & Doong, 2010). Moreover, during the past decade, internet-based data collection has increased so response rates have decreased thus increasing the need to offer incentives for participation (Teitcher et al., 2015). There is evidence that incentives increase online survey participation by about 27% but also have the potential to encourage multiple submissions (Manzo & Burke, 2012; Teitcher et al., 2015). There is conflicting evidence on the effect of incentives on response rate (Sánchez-Fernández et al., 2012; Sauermann & Roach, 2013). We attribute the success of our screening survey to (a) the relevance and value of the prize and (b) alleviating respondents' perceived risks of participation. The prize, a "lottery incentive with a high payoff and a low chance of winning" (Sauermann & Roach, 2013, p. 273) was something they really wanted: a season ticket to their favourite football team. The prospective participants were presented with prudently crafted legal documents explaining both the prize draw process and the data protection safeguards.

To reduce participants' perceived risk and make sure they trusted that the prize would be awarded through a transparent and unimpeachable procedure, we employed the services of a notary public to write the Terms and Conditions document that preceded the online survey and to design and oversee the lottery process. Not only were the terms of the competition clearly explained, but also, details of the time and place of the draw as well as the ways by which the winners would claim their prizes were provided before they completed the survey.

Another problem with online surveys is that there really is no guarantee of respondent anonymity as the IP addresses of the visitors to the survey website can be recorded. In the case of our focus group recruiting and screening survey the problem was compounded by the need to collect the personal and contact details

needed to arrange the focus group meetings. So, for both surveys – even for the quantitative one where no names and contact details were required – we employed the services of an academic specialising in online privacy issues who worked together with a lawyer to prepare a Privacy Policy Disclaimer. Both legal documents were presented as hyperlinks in the first and the last pages of the electronic surveys and respondents had to click a button to accept the terms and enter the survey and another one to submit their responses. Further to the conditions standard university ethics stipulate, we reassured potential respondents that (a) all safety measures were taken for the domains to be free of viruses and other threats to their computers, (b) no further communication would ever be attempted and (c) the contact details and IP files would be destroyed upon completion of the research.

Moreover, several filters were built into the focus group screening survey to ensure that the respondents' time was not wasted and that no personal data that was not absolutely necessary was collected. For example, residents of cities other than the ones where we intended to run focus groups were thanked for their attempt to complete the survey and the session was terminated at the third question, after about 20 seconds. The efficacy of the filters is evident in that out of the 1,680 people that attempted to respond to the survey, 976 were eliminated, thus also reducing data handling and screening time and effort. Finally, we offer our insights in confidence of their efficacy as only 3% of the email addresses we collected were not valid.

## Data collection: party time!

The proof of a good host is in providing guests with a superb experience at the time of the party. After being allowed into subjects' computer-mediated private spaces and managing to generate high quality data, the research also needs to be perceived as interesting, fun, and amazing enough to motivate its subjects to Like and Share the research with their Friends and Followers thus creating snowballing effects.

The criteria for selecting the technology for designing, hosting and administering an online survey are (a) user interface and experience (UI/UE), (b) researcher interface (c) credibility, (d) hosting and (e) instrument self-promotion. The insights we gained on them by setting up the virtual party, our online data collection, are presented in Table 3.
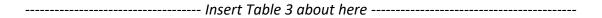
For the survey that recruited participants for the focus groups we used Google Docs which is free and very easy to use but has limited room for aesthetic adjustments. It comes with free hosting but offers no web analytics data. As respondents were to supply their details, the analytics were superfluous and aesthetics and advanced programming functionalities were considered of limited value for a short and simple screening survey.

For the lengthy and sophisticated quantitative survey of the model building and testing phase of the research, we employed a web developer and programmer to customise LimeSurvey, an open source survey application. The modifications we made were (1) to create and attach an algorithm to randomly assign the questionnaire versions required for the quasi-experimental design (photos and bios

of local, global, active and retired celebrity footballers), (2) to install IP address authentication for filtering out returning users, (3) to track the page from which the user had been redirected, (4) to modify standard Likert scales to include a 'no opinion' option needed for scale cleaning at the measure construction phase of the analysis (5) to add the logos of the university and funding agency to increase credibility and alleviate perceived risks (6) to customise and aesthetically improve the default templates and (7) to add 'buttons' with the logos of various popular platforms through which the participants could invite members of their online social networks to participate in the study (see Figure 3 for the 'look and feel' of the landing page).

-------------------------------------- *Insert Figure 3 about here* --------------------------------------

The survey was uploaded to a university server to increase the credibility of the research by clearly signalling the purely academic nature of the research and to allow us to collect page visit and visitor profile data via Google Analytics in order to test for sample quality and representativeness.

----------------------------------- *Insert Table 3 about here* -------------------------------------------

We performed numerous ex-post quality controls to address potential online survey pitfalls (Schmidt, 1997) such as contamination and skewing of results by accidental, fraudulent or malicious multiple submissions by the same individual, an increasingly common and serious problem in online research (Teitcher et al., 2015). We performed manual and visual checks for outliers and irregular patterns in questionnaire completion time, variables and cases with too many repetitive, outlying or missing values. We also checked for duplicate or irregular IP addresses (such as too many Chinese IPs on a survey written in Greek) using the tools freely available on NirSoft.net. Moreover, we used Google Analytics data to control for self-selection bias effects by comparing our data set demographics with those of the website and the pages through which the questionnaire was promoted.

Both survey samples were representative both of the internet and the football fan population in Greece and in line with similar European (Bauer, Sauer, & Schmitt, 2005) and Greek studies (Athanasopoulou, Zafeiropoulou, Siomkos, Assiouras, & Douvis, 2011) so we offer our insights in confidence that the strategies and tactics we employed were efficient, effective and efficacious. In Table 3, we summarise the techniques we used and found them to produce the desired results. We also list some suggestions derived from our mistakes and our experiences with subsequent projects.

## Conclusions and reflections: the hosts' after party

With the full benefit of hindsight, and after a lot of soul searching, we feel that we hosted an overall successful party in which academia and practice got better acquainted. First, we evaluated over three decades of mixed methods and almost two decades of on-line research reports published in academic journals and handbooks under the light of the experiences of professional e-marketers showcased in commercial websites and blogs. Then, we identified, evaluated and used multiple

sources of information not traditionally accessed for academic research. Based on these secondary data, we set up and run a media collaboration for participant recruitment. We also identified, reviewed and tested different data collection instrument building and hosting platforms. In essence, we recruited, selected and managed a dynamic virtual team of graphic artists, media and IT practitioners. Finally, we critically examined the results of our e-adoptions.

The process of designing and executing the project was not always smooth. Neither were our understandings automatically self-evident to our media partners and tech-services suppliers. Explaining what we wanted and understanding what was technically possible often proved to be a struggle but, we are happy to report, we managed to work through our experiences to turn them into shareable insights. We are here presenting a practical online mixed methods research guide and a set of tried and tested methodological tools for the 21$^{st}$ century. With this chapter, we firmly reconfirm the applicability, and argue for the necessity – if not the inescapability – of on and offline mixed methods management research. We contribute to knowledge by enriching academic practice with insights gained by businesses and by providing managers with academically sound testing of their practises. Thus, we offer a guide for bringing academically solid management research practices on and in line with the realities of the web2.0+ lived experience.

Our team comprises a Gen Xer, a Baby Boomer and a Millennial, so we are an adequately representative sample of the massively digital immigrant business academic community. We feel that the three aspects of 21$^{st}$ century mixed methods research that are the most alien to contemporary researchers are (i) securing sampling integrity online (ii) selecting appropriate media and cost-effective techniques for the promotion of the research and (iii) the technicalities of on-line data collection. In Table 1, Table 2 and Table 3 we provide our hard-gained insights and suggestions based on what we did and worked, what we tried and found out does not work, and what we now know we should have done.

The media sponsorship that made the application of the promotional strategies presented here possible was the result of mobilising pre-existing personal networks. This is not always possible, however. What researchers need to do is understand the roles, benefits and challenges of owned, paid, and earned media so that they make sure they strike the right balance of effort, time and funds expended to achieve adequate promotion of the research and to ensure sampling adequacy and integrity. Owned media (web and mobile sites, blogs etc. dedicated to the project) are controllable, versatile, cost efficient and, over time, they provide visibility and build relationships with potential respondents and journalists so they generate both data and earned media. Earned media (the publicity that is generated by people that have shown an interest in the research and they choose to promote it through their own media), might be hard to measure, impossible to control and slow to grow but they have the benefits of being transparent, long-lived and as credible as their source – at least to the source's audience. Paid media (the researcher-paid leverage of the power of other channels through advertising, paid searches and content marketing) can feed the owned and support the earned media but it is becoming increasingly more difficult for them to cut through media clutter, adblocking software and

audience boredom. So, if we were to do it all over again, we would start by building a blog, website and relevant Social Media pages dedicated to the research for recruiting participants and media collaborators. We would upload carefully crafted articles, in plain language and lay terms, to highlight the broader context of the research without giving away hypotheses or findings that would introduce bias we could not later control for. We would also run a carefully planned email marketing campaign.

Technology changes fast, so, what is now is not tomorrow. Hence, management researchers need, not only to familiarise themselves with, but to constantly stay in touch with developments in both IT and marketing, regardless of their field of work. These developments change the tools of the academic trade. The deeper issue that emerges from the discussion above, however, is how the tools change their user. Long gone are the days of the Ivory Tower, from which the university researcher descended gracefully to meet subjects that were eager to share their opinions over a cup of coffee, at the street corner or over the telephone. The 21$^{st}$ century researchers are – whether we like it or not - entrepreneurs, fund-raisers and project managers as well as the mass marketers of their work and themselves.

In the UK, the Arts and Humanities Research Council funds academics that are 'listenable', that is, they have the mental flexibility to engagingly parry journalists, the ability to 'dumb down' complex ideas, the right looks and a pleasant voice (Tickle, 2012). Even though it has been argued that, no matter how famous, scholars cannot be classed as celebrities (Leslie, 2011) the fact remains that 21$^{st}$ century ones find it hard to resist the lure (Kurzman et al., 2007) of publicly displayed authority for entertainment purposes that makes them spend more time in studios than in studies thus commanding speaking engagement that look like a fortune to their off the limelight colleagues. Thus, academic careers become similar to those of fashion models; all about building and exploiting "field-specific social and cultural capital" (Parmentier, Fischer, & Reuber, 2012). It seems that the new realities make managing the necessary "modifications in [the academics'] role identity" (Jain, George, & Maltarich, 2009, p. 922) a prerequisite for attracting research funds, media sponsorships for their projects and even students to their universities (Joseph, Mullen, & Spake, 2012); all in the course of serving science.

## References

Abeza, Gashaw, O'Reilly, Norm, Dottori, Mark, Séguin, Benoit, & Nzindukiyimana, Ornella. (2015). Mixed methods research in sport marketing. *International Journal of Multiple Research Approaches, 9*(1), 40-56. doi:10.1080/18340806.2015.1076758

Alexa. (2016, 23/12/2016). Top Sites in Greece November 2016. Retrieved from http://www.alexa.com/topsites/countries/GR

Arnaboldi, Michela, Lapsley, Irvine, & Steccolini, Ileana. (2015). Performance management in the public sector: The ultimate challenge. *Financial Accountability & Management, 31*(1), 1-22.

Athanasopoulou, Pinelopi, Zafeiropoulou, Gioula, Siomkos, George J, Assiouras, Ioannis, & Douvis, John. (2011). *Consumer Behaviour In The Arena: A Classification Of Football Fans.* Paper presented at the 4th Annual EuroMed Conference of the EuroMed Academy of Business.

Baudrillard, Jean. (1988). *The Consumer Society: Myths and Structures (Société de Consommation: Ses Mythes, Ses Structures)* (Chris Turner, Trans.). London: Sage.

Bauer, Hans H., Sauer, Nicola E., & Schmitt, Philipp (2005). Customer-based brand equity in the team sport industry: Operationalization and impact on the economic success of sport teams. *European Journal of Marketing, 39*(5-6), 496-513.

Bryman, Allan, & Bell, Emma. (2007). *Business Research Methods* (2nd ed.). Oxford: Oxford University Press.

Creswell, John W., & Plano Clark, Vicki L. (2011). *Designing and Conducting Mixed Methods Research* (2nd ed.). Thousand Oaks: SAGE Publications.

Cui, Xiling, Zhou, Qiang, & Liu, Libo. (2015). Using online field surveys in e-business research: reflections on a referent study. *International Journal of Electronic Business, 12*(4), 345-363. doi:10.1504/ijeb.2015.074610

Deutskens, Elisabeth, de Ruyter, Ko, Wetzels, Martin, & Oosterveld, Paul. (2004). Response Rate and Response Quality of Internet-Based Surveys: An Experimental Study. *Marketing Letters, 15*(1), 21-36. doi:10.1023/b:mark.0000021968.86465.00

eMarketer. (2014). Traditional or Digital Ads? Millennials Show Mixed Feelings. *eMarketer.com*. New York, NY: eMarketer Retrieved from https://www.emarketer.com/Article/Traditional-Digital-Ads-Millennials-Show-Mixed-Feelings/1010747#sthash.m3HSKh07.dpuf

European Interactive Advertising Association. (2008). *Sport and the Shift to Interactive Media 2008, Pan-European results*: Retrieved from: http://www.sponsors.de/uploads/tx_svsstudiengaenge/EIAA_-_Sport_and_the_Shift_to_Interactive_Media_2008.pdf

Fricker, Ronald D. Jr. (2008). Sampling methods for web and e-mail surveys. In Nigel G Fielding, Raymond M Lee, & Grant Blank (Eds.), *The SAGE Handbook of Online Research Methods* (pp. 195-216). London: SAGE Publications.

Gaines, Brian J., Kuklinski, James H., & Quirk, Paul J. (2007). The Logic of the Survey Experiment Reexamined. *Political Analysis, 15*(1), 1-20. doi:10.1093/pan/mpl008

Google. (2016). Google Trends. Retrieved 29/12/2016, from Google https://www.google.com/trends/

Hancock, Leslie. (2016). B2B Programmatic vs Ad Blockers: Who's winning. *Perspectives, Marketing and Sales*. dun&bradstreet Retrieved from http://www.dnb.com/perspectives/marketing-sales/b2b-programmatic-vs-ad-blockers-who-is-winning.html

Hanna, Richard, Rohm, Andrew, & Crittenden, Victoria L. (2011). We're all connected: The power of the social media ecosystem. *Business Horizons, 54*(3), 265-273. doi:10.1016/j.bushor.2011.01.007

Harrison, Robert L., III. (2013). Using mixed methods designs in the Journal of Business Research, 1990–2010. *Journal of Business Research, 66*(11), 2153-2162. doi:h<u>ttp://dx.doi.org/10.1016/j.jbusres.2012.01.006</u>

Harrison, Robert L., III, & Reilly, Timothy M. (2011). Mixed methods designs in marketing research. *Qualitative Market Research: An International Journal, 14*(1), 7-26. doi:h<u>ttp://dx.doi.org/10.1108/13522751111099300</u>

Hesse-Biber, S.N., & Leavy, P. (2008). *Handbook of Emergent Methods*: Guilford Press.

Hewson, Claire. (2008). Internet-mediated Research as an Emergent Method and it's Potential Role in Facilitating Mixed Methods Research. In S.N. Hesse-Biber & P. Leavy (Eds.), *The Handbook of Emergent Methods* (pp. 543-570): Guilford Press.

International Telecommunication Union. (2016a). Fixed telephone subscriptions (per 100 people) Retrieved 21/12/2016, from The World Bank Group h<u>ttp://data.worldbank.org/indicator/IT.MLT.MAIN.P2</u>

International Telecommunication Union. (2016b). Individuals using the Internet. Retrieved 21/12/2016, from The World Bank Group h<u>ttp://data.worldbank.org/indicator/IT.MLT.MAIN.P2</u>

Internet Live Stats. (2014). Internet Users by Country. Real Time Statistics Project Retrieved from h<u>ttp://www.internetlivestats.com/internet-users-by-country/</u>

Internet World Stats. (2016). World Internet Usage and Population Statistics, June 30, 2016 - Update. Retrieved 06/12/2016, from Miniwatts Marketing Group. h<u>ttp://www.internetworldstats.com/stats.htm</u>

Jain, Sanjay, George, Gerard, & Maltarich, Mark. (2009). Academics or entrepreneurs? Investigating role identity modification of university scientists involved in commercialization activity. *Research Policy, 38*(6), 922-935.

Johnson, R. Burke, Onwuegbuzie, Anthony J., & Turner, Lisa A. (2007). Toward a Definition of Mixed Methods Research. *Journal of Mixed Methods Research, 1*(2), 112-133. doi:10.1177/1558689806298224

Joseph, Mathew, Mullen, Eileen Wall, & Spake, Deborah. (2012). University branding: Understanding students' choice of an educational institution. *Journal of Brand Management, 20*(1), 1-12.

Kemp, Simon. (2016). *Digital in 2016*: Retrieved from: h<u>ttp://wearesocial.com/uk/special-reports/digital-in-2016</u>

Kemper, Elizabeth A., Stringfield, Sam, & Teddlie, Charles (). . , 273-296. . (2003). Mixed methods sampling strategies in social science research. In Abbas Tashakkori & Charles Teddie (Eds.), *Handbook of mixed methods in social and behavioral research*. Thousand Oaks, CA: Sage.

Kurzman, Charles, Anderson, Chelise, Key, Clinton, Lee, Youn Ok, Moloney, Mairead, Silver, Alexis, & Van Ryn, Maria W. (2007). Celebrity Status*. *Sociological Theory, 25*(4), 347-367. doi:10.1111/j.1467-9558.2007.00313.x

Leslie, L.Z. (2011). *Celebrity in the 21st Century: A Reference Handbook*: ABC-CLIO.

Luck, Edwina M. , & Mathews, Shane W. (2010). What Advertisers Need to Know about the iYGeneration: An Australian Perspective. *Journal of Promotion Management, 16*(1-2), 134-147. doi:10.1080/10496490903574559

Lutha, Irma, & Virtanen, Ilkka. (1996). Analyzing the behaviour of a non-linear advertising campaign model; an application of bifurcation theory, Lyapunov

exponents and correlation dimension. In Pirkko Walden, Malin Brannback, Barbo Back, & Hannu Vanharanta (Eds.), *The Art and Science of Decision-Making* (pp. 138-151). Åbo Åbo Akademi University Press.

Manzo, Amber N, & Burke, Jennifer M. (2012). Increasing response rate in web-based/internet surveys *Handbook of survey methodology for the social sciences* (pp. 327-343): Springer.

McGrath, Joseph E. (1981). Dilemmatics: The Study of Research Choices and Dilemmas. *American Behavioral Scientist, 25*(2), 179-210.

MediaScope Europe. (2012). *Greece Launch Presentation Summary*: Retrieved from: http://www.iab.gr/files/1/research/Mediascope/mediascope_2012_greece_summary%20launch%20presentation.pdf

Morgan, David L. (1997). *Focus groups as qualitative research* (2nd ed.). Thousand Oaks, CA, US: Sage Publications, Inc.

Murphy, Priscilla. (1996). Chaos theory as a model for managing issues and crises. *Public Relations Review, 22*(2), 95-113. doi:http://dx.doi.org/10.1016/S0363-8111(96)90001-6

O'Brien, James (2012). How Red Bull takes Content Marketing to the extreme. *Mashable*. Mashable Retrieved from http://mashable.com/2016/12/22/robotic-mobilization-device/#YRcwESBSraqi

PageFair, & Adobe. (2014). *Ad Blocking Goes Mainstream*: Retrieved from: https://downloads.pagefair.com/wp-content/uploads/2016/05/Adblocking-Goes-Mainstream.pdf

PageFair Team. (2015). The 2015 Ad Blocking Report. *PageFair*. Retrieved from https://pagefair.com/blog/2015/ad-blocking-report/

Panigyrakis, George, & Zarkada, Anna. (2014a). New Philosophical Paradigms in Marketing: From amoral consumerism to axiological societing. In Luiz Moutinho, Enrique Bigne, & Ajay K. Manrai (Eds.), *The Routledge Companion on the Future of Marketing* (pp. 25-50). Oxford: Routledge.

Panigyrakis, George, & Zarkada, Anna. (2014b). A philosophical investigation of the transition from Integrated Marketing Communications to metamodern meaning cocreation. *Journal of Global Scholars of Marketing Science, 24*(3), 262-278. doi:10.1080/21639159.2014.911494

Parmentier, Marie-Agnès, Fischer, Eileen, & Reuber, A. (2012). Positioning person brands in established organizational fields. *Journal of the Academy of Marketing Science*, 373-387. doi:10.1007/s11747-012-0309-2

Podsakoff, Philip M., MacKenzie, Scott B., Jeong-Yeon, Lee, & Podsakoff, Nathan P. (2003). Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies. *Journal of Applied Psychology, 88*(5), 879.

Sánchez-Fernández, Juan, Muñoz-Leiva, Francisco, & Montoro-Ríos, Francisco Javier. (2012). Improving retention rate and response quality in Web-based surveys. *Computers in Human Behavior, 28*(2), 507-514. doi:http://dx.doi.org/10.1016/j.chb.2011.10.023

Sauermann, Henry, & Roach, Michael. (2013). Increasing web survey response rates in innovation research: An experimental study of static and dynamic contact

design features. *Research Policy, 42*(1), 273-286. doi:http://dx.doi.org/10.1016/j.respol.2012.05.003

Schmidt, William C. (1997). World-Wide Web survey research: Benefits, potential problems, and solutions. *Behavior Research Methods, Instruments, & Computers, 29*(2), 274-279. doi:10.3758/bf03204826

Sedoglavich, Vesna, Akoorie, Michèle E.M., & Pavlovich, Kathryn. (2015). Measuring Absorptive Capacity in High-Tech Companies: Mixing Qualitative and Quantitative Methods. *Journal of mixed methods research, 9*(3), 252-272. doi:10.1177/1558689814523677

Sharpe, Matthew (2005). Jacques Lacan (1901-1981). In James Fieser & Bradley Dowden (Eds.), *The Internet Encyclopedia of Philosophy (IEP): A Peer Reviewed Academic Resource*.

Statista. (2016). Mobile phone internet user penetration worldwide from 2014 to 2019 Retrieved 28/12/2016, from Statista https://www.statista.com/statistics/284202/mobile-phone-internet-user-penetration-worldwide/

Stec, Carly. (2015). 20 Display Advertising Stats That Demonstrate Digital Advertising's Evolution Retrieved from https://blog.hubspot.com/marketing/horrifying-display-advertising-stats#sm.000whbz5ucmadwf10k71tymg9oh01

Sternberg, Ernest. (1995). The economy of icons. In Walter Truet Anderson (Ed.), *The Truth about the Truth: De-confusing and Re-constructing the Postmodern World* (pp. 82-85). New York: Jeremy Tarcher/Putnam.

Teitcher, Jennifer E. F., Bockting, Walter O., Bauermeister, José A., Hoefer, Chris J., Miner, Michael H., & Klitzman, Robert L. (2015). Detecting, Preventing, and Responding to "Fraudsters" in Internet Research: Ethics and Tradeoffs. *The Journal of law, medicine & ethics : a journal of the American Society of Law, Medicine & Ethics, 43*(1), 116-133. doi:10.1111/jlme.12200

Tickle, Louise. (2012). So you want to be the new Brian Cox? … How to become a celebrity academic *The Guardian International*. London: The Guardian Retrieved from https://www.theguardian.com/education/2012/may/14/celebrity-academic-radio-tv-funding

Tzoumaka, Eugenia, & Zarkada, Anna. (2013, September 25-27). *Towards a Model of Consumer Engagement with Celebrity Brands.* Paper presented at the 4th EMAC Regional Conference, St. Petersburg, Russia.

Tzoumaka, Eugenia, & Zarkada, Anna. (2016, 22-24 June). *'He had a Meaning in my Mind' Unpacking Celebrity Footballer Brands* Paper presented at the 4th International Conference on Contemporary Marketing Issues, Heraklion, Greece.

United States Postal Service. (2006, 13/01/2016). A decade of facts and figures. Retrieved from https://about.usps.com/who-we-are/postal-facts/decade-of-facts-and-figures.htm

Wang, Hui-Chih, & Doong, Her-Sen. (2010). Nine issues for Internet-based survey research in service industries. *The Service Industries Journal, 30*(14), 2387-2399. doi:10.1080/02642060802644926

Zarkada, Anna, & Polydorou, Christina. (2013). You might be reputable but are you 'Liked'? Orchestrating Corporate Reputation Co-Creation on Facebook. In Tanya Bondarouk & Miguel R.  Olivas-Lujan (Eds.), *Advanced Series in Management - Social Media in Strategic Management* (Vol. 11, pp. 87-113). London: Emerald.

Zarkada, Anna, & Tzoumaka, Eugenia. (2015, May 26-29). *The Effect of Footballer Brand Characteristics on Fans' Ticket Purchase Intention.* Paper presented at the European Marketing ACademy 2015, Leuven, Belgium.

Zarkada, Anna, & Tzoumaka, Eugenia (2014, July 15-18). *Exploring Soccer Fans' Schemata Regarding Global VS Local Human Brands.* Paper presented at the 2014 Global Marketing Conference Singapore.

Zarkada, Anna, Tzoumaka, Eugenia, Siomkos, George , & Panigyrakis, George (2014, December 1-3). *Achievement-Based Celebrities as Objects & Instruments of Consumption.* Paper presented at the Australia-New Zealand Marketing Academy (ANZMAC2014 Agents of Change), Brisbane, Australia.

# Figures and Tables

| Frame Sequence | Graphics | Translation & Explanation |
|---|---|---|
| 1 |  | Logos of the funding organization (FIFA) and the University, the second oldest in Greece to give the survey credibility and reduce the perceived risk of frugging and sugging<br>The logos were popping inside the graphic of a football field. |
| 2 |  | "Give your opinion where it counts"<br>Flattery and altruistic appeal |
| 3 |  | "Win a season ticket for your favourite team."<br>Egoistic appeal |

Figure 1: Banner Advertisement example

**Selected screen shots**



*Translation & notes*

Sport24-Football-Greece
Research: The abandonment of the football field during the Greek crisis

Reporter: Gregory Basis
Published: 13 November 2013 13:26

Logos of the five most popular Greek football teams and the Greek Superleague

"Football fields are emptying, football is being abandoned and FCs are vegetating. Take part in the FIFA sponsored research on Greek football by answering 8 simple questions."

The red words in the text of the article ("research" and "through the research") as well as the red text on the right and left of the interview which read "Participate in the research by answering 8 questions about football" and "By participating in the research you stand to win a season ticket" are actually hyperlinks to the online questionnaire.

Figure 2: Content Marketing example

Figure 3: Screenshot of the quantitative survey landing page

Table 1: Criteria for promotional media selection

| Criteria | Tips |
| --- | --- |
| Relevance | Make sure the topics covered by the medium are closely aligned to the research theme. |
| Appeal | Use multiple sources to cross check metrics such as.<br>• ranking of the medium in relation to its competitors in the region of interest<br>• average session duration (time spent on site at each visit)<br>• number of pages clicked<br>• bounce rate (percentage of visitors who enter the site but leave it without interacting with the site instead of continuing to other pages within the same medium)<br>• overall web traffic statistics (an aggregate metric comprising the number of visitors and the number of pages they visit)<br>• content curation (the content they pick from other sources and upload to the medium)<br>• content sharing (the content other media pick and reproduce from the medium that is being evaluated)<br>• quantity, quality and relevance of the user-generated content (such as comments and discussions) posted under relevant topics. |
| Audience profile | • Make sure the demographics of the medium are representative of the population.<br>• Check medium access patterns in terms of time (e.g. early morning or late evening), place (e.g. home, school, train or office) and technology (e.g. pc, smartphone or tablet) and use them as survey design parameters. |
| Partisanship | • Make sure that there is no conflict of interest between the medium and the topic of research.<br>• Check whether the medium is being perceived as biased in any way related to the study. |
| Cost | Negotiate a media sponsorship or content sharing agreement and/or a price that includes multiple promotional opportunities. |
| Data sharing | Request full access to web analytics for all content and promotional activities and failing that ensure that you get regular reports. |

Table 2: Promotional Techniques

| Alternatives | Tips |
|---|---|
| *Banner Advertising* | • Check CTR for similar type of ads in the region and general industry of interest through multiple sources.<br>• Check Ad Blocking software penetration in the region of interest through multiple sources.<br>• Carefully negotiate the placement.<br>• Consider using Google Display Network (instead of negotiating with sites for ad placement you specify the audience segmentation parameters and Google does the placement of the ad).<br>• Have the ad professionally designed and produced.<br>• Do not use the outdated flash technology as this does not display properly on all screens. Use static images, GIFs and, if budget permits, videos. |
| *Content Marketing* | • Control for sampling and other biases introduced by the medium and/or the text.<br>• Include many different calls to action and hyperlinks in and around the main text.<br>• Carefully negotiate concurrent promotions, multiple articles and access to web-analytics. |
| *Social Media Promotion through the medium's owned media* | • Carefully consider the reach, style and appeal of the medium's SM portfolio and those of its elements (Facebook, twitter etc.)<br>• Request access to detailed platform analytics (e.g. Facebook demographics and usage patterns during the week and day).<br>• Study the comments and shares of the users to calculate the risks of message distortion.<br>• Check the content of the posts to ensure that response biases are not introduced by the wording of the condensed text to fit message length restrictions.<br>• Use the services of professional designers to produce visual content appropriate for SM.<br>• Negotiate bundle price for numerous carefully timed posts. |
| *Mixed Mode* | Check for systematic response variance across subsamples defined by the entry point to the survey which you track by creating custom links on each medium through Campaign URL Builder. |

Table 3: Technical aspects of designing and hosting on-line data collection instruments

| Criteria | Tips |
|---|---|
| *User interface and user experience (UI/UX)* | <ul><li>Invest in the services of experienced professional graphic artists and web developers.</li><li>Have responsiveness checked thoroughly on all devices and Operating Systems used by the population.</li><li>Use multiple filters in the survey design to *a priori* control sample characteristics instead of wasting respondents' time to collect data you will later discard.</li></ul> |
| *Researcher Interface* | <ul><li>Pay close attention to the programing required for the delivery of a useable data file (e.g. make sure that responses to Likert scales are delivered ready-coded into numbers and not as the words that appear on the survey).</li><li>Specify questions as mandatory to collect only the responses of committed and interested participants, filter out internet lurkers and thus save data cleaning time.</li></ul> |
| *Credibility* | <ul><li>Use the university and/or funding organisation logos on the cover page, at the bottom of survey pages and provide hyperlinks to the relevant pages of their websites.</li><li>Provide valid contact details and hyperlinks to the profiles of the investigator(s) on the university website.</li></ul> |
| *Hosting* | <ul><li>Host the data collection instrument on a secure server to which you have access for maintenance and analytics. If you choose to use a survey creation and data collection application, do not host the survey on their server.</li><li>Use web analytics tools for response rate calculations.</li><li>Consider using IP Authentication to filter out malicious response attempts or fraud (especially when offering incentives for participation) but also check the data set visually and manually.</li></ul> |
| *Instrument self-promotion* | <ul><li>Add Social Media buttons at the entry and thank you pages for easy snowballing.</li><li>Buy a carefully chosen domain name and invest in SEO (applying on and off-page refinements so that the site will be indexed and ranked successfully by the search engines) to increase survey visibility and domain authority.</li></ul> |