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THE PARTICIPATION DIVIDE
Content creation and sharing in the digital age[1]

This paper looks at the prevalence of creative activity and sharing in an age when the barriers to disseminating material have been considerably lowered compared with earlier times. The authors use unique data to explore the extent to which young adults create video, music, writing and artistic photography, as well as the prevalence of sharing such material online. Findings suggest that despite new opportunities to engage in such distribution of content, relatively few people are taking advantage of these recent developments. Moreover, neither creation nor sharing is randomly distributed among a diverse group of young adults. Consistent with existing literature, creative activity is related to a person's socioeconomic status as measured by parental schooling. The novel act of sharing online, however, is considerably different by gender with men much more likely to engage in it. However, once internet user skill is controlled for, men and women are equally likely to post their materials on the Web.

Keywords   Participation; skill; inequality; digital divide; creativity; content; sharing; posting; gender; internet; web; users; digital inequality; digital literacy; music; video; arts

Introduction

Recent developments on the web and in the realm of other digital media have made it increasingly possible for people to share their creations with others. No longer must one have large budgets to finance production and the necessary influence to get past gatekeepers when attempting to disseminate one's work (Hargittai 2000). While eyeballs for viewership are not guaranteed, the prospect of reaching large audiences is more within the realm of possibilities than in earlier times. Does the availability of such opportunity lead to widespread participation? If uptake is not universal, are there systematic differences in who does and does not take advantage of these recent advances?

This paper examines the prevalence of content creation and sharing among a highly wired group of young adults to consider whether new opportunities offered by digital media to disseminate one's creations are distributed equally among users.

If we find unequal uptake of these activities then such discrepancies imply the emergence of a two-tiered system where some people contribute to online content while others remain mere consumers of material. Those who share their content publicly have the ability to set the agenda of public discussions and debates (McCombs & Shaw 1972, 1993; Iyengar et al. 1982; Rogers 1993). From movie-making to op-ed writing, women have been consistently under-represented among the most prominent creators (Nochlin 1971; Bosman 2005; Kurtz 2005; Pollitt 2005; Cohen 2007; Lauzen 2007; Toms 2007). Whether this is due to women submitting less work for inclusion or to the fact that women's creative output may not always be taken as seriously as that of their male counterparts, recent online developments could level the playing field by allowing women to sidestep traditional gatekeepers. Are women and men participating in online content sharing in equal ways? That is the question this paper sets out to answer.

Differences in people's digital media uses

For years now, researchers have argued that beyond differences in access to information and communication technologies, differential uses also have the potential to contribute to social inequality (Mossberger et al. 2003; DiMaggio et al. 2004; Warschauer 2004; Hargittai 2008). Consequently, research has started to distinguish among the types of online activities in which people engage (Wellman & Haythornthwaite 2002; Howard & Jones 2003). While some people may only turn to digital media on occasion and for only a few activities, others may make it an integral part of their lives whereby they benefit from various opportunities regularly.

Among young people in particular, concerns of digital inequality are less likely to revolve around issues of access given that they represent the most connected age group (Fox 2004). For this reason, scholars have examined differentiated uses among the connected finding that positive outcomes are not randomly distributed among youth from different backgrounds (Attewell & Battle 1999; Livingstone & Helsper 2007). In particular, research in both the US and the UK has shown that children from a higher socioeconomic background are more likely to experience educational gains from home computer and internet use than others. These findings are in line with work on the differentiated uses of more traditional media such as the viewing of educational television programming in earlier decades (Cook et al. 1975). However, most work looking at differentiated internet use has explored what people view online and has been less concerned with how youth are engaging with the more interactive aspects of digital media such as the creation of content and its sharing.

In addition to considering people's background characteristics in how internet uses may differ across population segments, researchers have also looked at details about people's online experiences that may contribute to differentiated uses. Howard et al. (2002) developed a user typology based on how long people have been online and their frequency of internet uses. They found that such user type was related to what people did online. Hassani (2006) focused on another aspect of use, the number of locations where people could access the internet. She found that those with more access points engaged in more online activities from which they may benefit. Not surprisingly, more access to digital media allows for more opportunities which may be especially relevant when it comes to time-intensive activities such as content creation and sharing.

Some of the work exploring details of differentiated internet use has started looking at people's digital literacy to distinguish among users' abilities in navigating digital media (Hargittai 2002, 2008; Mossberger et al. 2003; Bunz 2004). This body of literature argues that the myriad of opportunities on the web require different levels of know-how and those who possess particular skills will be more likely to benefit from time spent online. Such differentiated web savvy is likely to be especially relevant when it comes to advanced uses of information and communication technologies such as content creation and sharing.

Some scholars have started paying particular attention to differential rates of participation with digital media (Jenkins et al. 2006). Forms of participatory culture considered by such work include creative expressions like fan fiction and digital mash-ups as well as collaborative problem-solving, group affiliation and media circulation. The argument these authors make is that practices of this sort will increasingly enhance our society through augmenting people's skills necessary for functioning well in the contemporary workplace and for diversifying creative and cultural production.

Jenkins and colleagues (2002) label this last concern the 'participation gap' and, similarly to the above-cited research on digital inequality, note that access to technology no longer wholly determines potential inequalities derived from differential information and communication technology uses. Rather, exposure to experiences that increase participatory culture and digital literacy are unequally available to individuals regardless of their access to digital media. They contend that the participation gap may be overcome by a 'new media literacy' highlighting the importance of focusing on enhancing people's creative pursuits and abilities beyond providing technological access.

While more and more people have called for such refined understandings of the so-called digital divide (Hargittai 2004), there is a dearth of data that would allow researchers to explore these questions in detail. The Pew

Internet and American Life Project conducted a related study that is an exception. Data collected in 2003 suggest that 44 per cent of American adults had created or shared content online such as photographs, writing and other forms of expression (Lenhart et al. 2004). Bivariate analyses of the data show that people from higher socioeconomic backgrounds — measured as people's education and household income — were more likely to engage in such activities than others. Although more than a select few are participating in online creative pursuits, the activity is neither universal nor randomly distributed among internet users. For example, those from better-off households engage in more such pursuits.

The Pew report did not use more advanced statistical techniques to look at the predictors of online creation and sharing, so it is hard to use the report to pinpoint the real source of differentiated online participation. Moreover, beyond looking at the demographic background of respondents and the speed of their internet connection, the authors of the report did not include other factors that may relate to online posting. In contrast, we are able to consider additional aspects of people's internet uses here such as their online abilities.

In sum, despite the increasing focus on studying digital inequality by differentiating types of uses and skills, and mounting concerns about a participation gap, little work has considered whether there are systematic differences among those who share their creations online and those who do not. Thanks to a unique data set that includes detailed information on all of these factors, we are able to do just that. We examine whether people's background characteristics and their context of internet uses are related to creating content in a digital age and sharing such material on the web.

Methods

Data collection

We draw on data we collected to examine the question of content creation and online sharing. While resources such as the Survey on Public Participation in the Arts (National Endowment for the Arts 2003) exist to explore people's engagement in creative activities, we know of no other data set that includes the level of detail about the context of people's internet uses and their tendency to share their creations online in conjunction with detailed demographic background as the data set we analyse here. In addition to background characteristics, we collected nuanced information about respondents' experiences with digital media focusing especially on their internet uses in the domain of information seeking, content sharing and communication with people in their networks.

We look at the content creation and sharing practices of 1,060 first-year college students from an urban public research university. We conducted the study in February and March 2007 at the University of Illinois, Chicago.[2] Given our interest in looking at the creative practices of a diverse group of students, this campus offers an ideal site due to the make-up of its student body. US News and World Report (2006) ranked it among the top 10 national universities regarding campus ethnic diversity.

One course on campus is required of all students: the First-Year Writing Program. Working with instructors of this course, we gained access to students enrolled in it. This ensured that a representative sample of the school's first-year student body would have the opportunity to participate. Of the 87 sections offered as part of this course, 85 took part in the study yielding a 98 per cent participation rate on the part of course sections. Overall, there was a final response rate of 82 per cent based on all of the students enrolled in the course. In order to control for time in the programme, this article focuses on students in the first-year class.

We administered a paper-and-pencil survey to avoid biasing against people who feel less comfortable filling out web forms or who spend less time online and thus may have less of an opportunity to participate. The average survey completion time was approximately 30 minutes. The survey included detailed questions about respondents' internet uses (e.g. experience, context of use, types of sites visited, and online activities) and their demographic background.

Independent variables

We collected basic demographic information using standard modes of operationalization. Students were asked their year of birth, which we used to calculate their age and included it in the models as a continuous variable. Male is the base gender category (male = 0, female = 1). Information about race and ethnicity was collected using the US Census Bureau (2000) questionnaire format, and dummy variables are used in the statistical models, with White as the omitted category. Consistent with work by others, parental education is used as a measure of socioeconomic status (Carlson et al. 2000; Lamborn et al. 1991; Stice et al. 1999). This information is included in the model as dummy variables, with graduate degree as the base.

We also look at the relationship of online sharing with digital media resources and experiences. We asked students about different locations where they have access to the internet and created a summary variable. We log this value for inclusion in the model on the assumption that additional locations of access have diminishing returns regarding autonomy of use. We also asked about ownership of various technical devices (e.g. laptop, digital camera) and include a summary variable for this in the models.

To measure frequency of internet use, we gathered information about how much time students spend on the web on an average weekday and on an average weekend excluding time spent on email, chat and online phone conversations (VoIP). We then calculate average weekly hours spent online based on these figures. We also asked participants at what point in their education they started using the internet regularly and calculated years of experience based on this information. We log this figure for inclusion in the analyses based on the assumption that there are diminishing returns to additional years of experience. We measure skill using a previously validated instrument for digital literacy (Hargittai 2005). Respondents were asked to rate their level of understanding of 27 different internet-related terms on a five-point scale (Hargittai forthcoming 2008). We then create a summary variable to signify online ability.

Dependent variables

We are interested in both who creates content among young adults, and who shares their creations on the web. First, we asked students to tell us whether they 'personally *create* any of these types of content? This question is *not* restricted to online activities.'[3] Below this question were several options and respondents were asked to mark all that apply. Here, we consider the prevalence of four creative activities among participants: the creation of music; poetry or fiction; artistic photography; and film or video.

Next, we queried students about their online posting habits. In particular, we asked whether in the past year they had posted their own poetry or fiction online, their own music, and their own video. In the case of the latter two, we asked about both posting their *own* music and video as well as music and video they *remixed from other people's* materials. We include information about these activities on the aggregate (that is, in the analyses we do not distinguish between posting one's own or remixed music and video). We asked about the sharing of artistic photography in a somewhat more limited manner. As part of a separate question concerning students' use of social networking sites such as MySpace and Facebook, we inquired whether they post artistic photography that they have created. Undoubtedly this is more constrained than having asked whether they post artistic photography anywhere, but it is the only such measure we have so this is what we include here.

For both creative and posting activities, we calculated a dummy variable that looks at whether a student creates any of the four types of content, and whether a student posts any of the four types of content.

Methods of analysis

We first present descriptive statistics about different types of people's tendency to create content and post their creations online. To examine the correlates of creating content, we ran a logistic regression analysis on whether people create content looking at background characteristics of the user (age, gender, race and ethnicity, and parental education). To look at predictors of posting, we ran a logistic regression analysis first on the demographic variables only and then with the inclusion of internet use measures to examine the mediating role of these factors.

Sample descriptives

The 1,060 first-year students included in these analyses represent a diverse group of people.[4] Table 1 shows descriptive statistics about the sample. Fifty-six per cent of the respondents are female, 44 per cent are male. Almost all are 18 or 19 years old, with a mean age of 18.4 and a median of 18. Fewer than half are White and non-Hispanic. Slightly less than 8 per cent claim African or African-American descent, almost 30 per cent are of Asian or Asian-American ancestry, and just under one-fifth are of Hispanic origin. These students come from varied family backgrounds. Over a quarter of respondents have parents whose highest level of education is high school, with an additional 20 per cent whose parents do not have a

TABLE 1 Descriptive statistics about the sample.

	per cent
women	55.8
age	
18	64.8
19	32.2
20–29	3.0
race and ethnicity	
White, non-Hispanic	42.7
Hispanic	18.8
African-American, non-Hispanic	7.7
Asian-American, non-Hispanic	29.6
Native American, non-Hispanic	1.2
parent's highest level of education	
less than high school	7.4
high school	19.0
some college	20.1
college	34.4
graduate degree	19.1

TABLE 2 Sample participants' internet use experiences.

	mean	standard deviation
number of internet use years	6.4	(2.0)
number of hours on the web weekly*	15.5	(10.0)
number of internet access locations	6.2	(2.1)
skill index	81.3	(22.6)

*This measure concerns only web use and excludes time spent on email, chat or VoIP.

college degree. Students in this sample should not all be assumed to represent future college graduates. Data about previous cohorts at UIC suggest that 25 per cent of first-years will drop out of college by their second year (Ardinger *et al.* 2004) and fewer than half (43.6 per cent) will graduate within six years of enrolment (University of Illinois – Chicago 2004).

Information about students' internet user experiences suggests that digital media are very much a part of their everyday lives (see Table 2). On average, respondents have been online for over six years and spend over 15 hours weekly visiting websites (not counting time spent on email, instant messaging and online telephony). The majority (93 per cent) have access to the internet at home, and on average they can go online at over six locations. Regarding skill, they exhibit varying levels of know-how with some reporting considerable knowledge while others report very little understanding of internet-related terms. The index measure of skill ranges from 29 to 135 with an average score of 88.3 (standard deviation: 22.6) suggesting considerable variation on this factor in the sample.

Engaging in creative activities

In order to consider who posts their creations on the web, it is important to establish who is most likely to engage in creative activities in the first place. We asked students whether they create different types of content online or offline. Overall, 60.8 per cent of students engage in at least one of the four content creation activities. The first row of Table 3 shows the activities by popularity. Students in the sample are most likely to create music with over a third doing so. Artistic photography is the next most popular creative undertaking with over a quarter of the sample taking such pictures. Just over a quarter of the students claim writing poetry or fiction and just over one in five report creating film or video.

The rest of Table 3 breaks down creative pursuits by type of background characteristics. We find no statistically significant difference between men's

TABLE 3 Percentage of respondents who create content.

	any	music	artistic photography†	poetry/ fiction	film/video
full sample	60.8	34.2	27.6	25.9	22.6
gender					
male	62.3	42.6***	25.2	20.5***	26.6***
female	60.0	27.4***	29.6	30.3***	16.9***
race and ethnicity					
White, Non-Hispanic	59.2	35.6	32.4**	20.9**	21.5
Hispanic	61.3	34.0	23.7	28.9	20.6
African-American, non-Hispanic	66.3	36.3	15.0**	52.5***	8.75**
Asian-American, non-Hispanic	60.5	31.4	27.5	23.2	28.1**
Native American, non-Hispanic	83.3	50.0	25.0	58.3**	33.3
parental education					
less than high school	57.7	35.9	17.9*	34.6	12.8*
high school	55.7	31.3	26.4	27.9	21.4
some college	62.7	32.5	30.2	29.2	24.5
college	56.3*	31.3	26.6	18.7***	21.2
graduate degree	73.3***	43.1**	32.2	30.2	28.2*

*$p < 0.005$, **$p < 0.001$, ***$p < 0.0001$; †this measure is restricted to posting on social networking sites only.

and women's participation on the aggregate. However, once we look at specific types of activities, considerable differences emerge. While just over a quarter of women (27.4 per cent) report creating music, 42.6 per cent of the men engage in this activity. Similarly with creating film or video, fewer than one in five women (16.9 per cent) have done so compared with over a quarter (26.6 per cent) of men in the sample. Women, however, report larger rates of participation when it comes to writing poetry or fiction: 30.3 per cent of female respondents versus 20.5 per cent of men engage in such writing.

We also find statistically significant differences by race and ethnicity. African-American and Native American respondents report significantly more writing than other groups. In contrast, African-Americans in the sample are significantly less likely to create artistic photography or film than others. In contrast, Whites in the study reported more creation of artistic photography than anyone else and less writing of poetry or fiction. Similarly, we find different levels of participation by parental education. Students who have at least one parent with a graduate degree are considerably more likely to create both music and video. In contrast, students whose

parents have no more than a high school education are significantly less likely to create artistic photography and video.

We used logistic regression to examine the independent relationship between students' demographic background characteristics and their tendency to engage in creative pursuits. Table 4 shows the results of the analysis. Consistent with research on arts participation (DiMaggio & Ostrower 1987; McCarthy *et al.* 2001), we find that students whose parents have higher levels of education are more likely to engage in a mix of online and offline creative activities. Neither gender nor race exhibits a statistically significant relationship with creative pursuits suggesting that the differences found in Table 3 are mediated by parents' level of schooling. In the case of gender, it may be that the different levels of engagement by type of activity cancel each other out on the aggregate.

TABLE 4 Logistic regression on being engaged in creative pursuits.

	creates content
age	1.065
	(0.093)
gender	0.906
(female = 1)	(0.120)
Hispanic	1.231
	(0.234)
African/African-American	1.451
	(0.381)
Asian/Asian-American	1.057
	(0.163)
parents' education: less than high school	**0.479***
	(0.145)
parents' education: high school	**0.477***
	(0.106)
parents' education: some college	**0.585***
	(0.129)
parents' education: college degree	**0.475***
	(0.092)
N	1,032
chi^2	20.856
pseudo R^2	0.015

$***p < 0.001, **p < 0.01, *p < 0.05$; two-tailed.

Posting content online

Having established who creates content, we turn to the especially innovative part of our data set by considering who is most likely to post material online and what is shared most often. Of the entire sample, 41 per cent of students report posting at least one of the four types of content on the web. Among those who create content, 56 per cent post online.

Considering posting by type of content, the most likely material to be posted is poetry or fiction at 51 per cent among those who report writing poetry or fiction (see the first column of Table 5). This is not surprising given that writing is probably the easiest form of content to share. Close behind and next in popularity is posting videos, which almost half of those who create film report doing. This may well be due to the recent popularity of video-sharing websites such as YouTube that make the distribution of such media fairly easy. In fact, more than four in five people in this sample visit that particular video-sharing website sometimes or often although clearly many of them only do so for viewing material and not necessarily for contributing to its inventory. Considerably fewer people report posting artistic photography and music.

It is also worth considering some of these activities for the full sample to appreciate the relative popularity of sharing online in the entire group (see the second column of Table 5). Not one of the four types of content is posted on the web by more than a fifth of the sample. Taking into account the entire group's posting habits, people are most likely to share videos on the web. Next in popularity are written forms of creative work, then artistic

TABLE 5 Respondents' online posting activities, without and with controlling for engagement in creative pursuits.

	among those who create the particular content	full sample
any	56.4	40.9
music (total)	28.7	12.9
music (own)	n/a	9.0
music (remixed)	n/a	7.1
artistic photography*	35.2	14.9
poetry or fiction	50.9	16.4
video (total)	49.8	19.1
video (own)	n/a	17.2
video (remixed)	n/a	4.1

*This measure is restricted to posting on social networking sites only.

photography, with music the least shared material. When distinguishing between a person's own creative output versus the result of remixing other people's content, the former is more popular for both videos and music. In the case of videos the difference is especially pronounced with 17.2 per cent of the full sample posting their own creations compared with only 4.1 per cent sharing remixes.

Table 6 shows the likelihood of posting content online controlling for the activity of making the various materials by type of subgroup. There is little that is statistically significant by race, ethnicity or parental education. However, we find considerable differences by gender. The figures suggest that 63.6 per cent of men have posted at least one of the four types of content in the last year while only 50.6 per cent of women shared any form of creative content on the web. Men are much more likely to post music than women, with 40.0 per cent of men claiming to have done so compared with only 14.8 per cent of their female counterparts. Similarly, 55.4 per cent of men report sharing video whereas only 42.0 per cent of women do so. In contrast, we find no statistically significant difference by gender for posting poetry or fiction and artistic photography.

TABLE 6 Percentage of respondents who *share* content, controlling for engagement in creative pursuits.

	any	music	poetry/ fiction	film/ video	artistic photography†
gender					
male	63.3**	40.0***	54.2	55.4*	40.0
female	50.6**	14.8***	49.2	42.0*	32.6
race and ethnicity					
White, Non-Hispanic	57.1	29.9	53.3	51.6	35.0
Hispanic	52.9	28.8	46.4	45.0	52.2*
African American, non-Hispanic	47.2	20.7	42.9	71.4	41.7
Asian American, non-Hispanic	61.1	32.3	56.3	50.0	27.4
Native American, non-Hispanic	40.0	0.0	28.6	50.0	33.3
parental education					
less than high school	55.6	21.4	51.9	80.0*	42.9
high school	58.0	33.3	58.9	46.5	47.2*
some college	57.9	27.5	50.0	38.5	32.8
college	55.6	28.1	41.2	50.6	36.1
graduate degree	55.4	29.9	55.7	56.1	24.6*

*p < 0.05, **p < 0.01, ***p < 0.001; †this measure is restricted to posting on social networking sites only.

TABLE 7 Logistic regression on likelihood of posting content online.

	posts content	
	background only	full model
age	0.809*	0.784*
	(0.082)	(0.080)
gender	0.588**	1.045
(female = 1)	(0.099)	(0.201)
Hispanic	0.839	1.042
	(0.204)	(0.273)
African/African-American	0.713	0.973
	(0.224)	(0.339)
Asian/Asian-American	1.238	1.173
	(0.246)	(0.255)
parents' education: less than high school	1.307	1.704
	(0.495)	(0.697)
parents' education: high school	1.350	1.706
	(0.359)	(0.491)
parents' education: some college	1.378	1.496
	(0.358)	(0.418)
parents' education: college degree	1.107	1.275
	(0.251)	(0.313)
sum of access locations (logged)		1.255
		(0.339)
hours on web/ week		1.001
		(0.009)
years online (logged)		1.202
		(0.416)
sum of devices owned		1.049
		(0.045)
web user skills		1.035***
		(0.005)
N	628	621
chi²	19.864	95.563
pseudo R²	0.023	0.112

***p < 0.001, **p < 0.01, *p < 0.05; two-tailed.

Do these differences in online sharing by gender hold up when controlling for other factors? Table 7 presents the results of logistic regression on whether people post any type of content on the web, first looking only at

demographic background (first column) and then adding details about people's internet uses as well (second column). The models include only people who reported creating content.[5]

Despite considerable uniformity in age among respondents, this variable still shows a statistically significant relationship with tendency to post one's creations online. Older students are less likely to engage in this activity. The only other background characteristic that matters is a user's gender. Women are significantly less likely to share their content on the web than men. That is, while gender is a significant correlate of online posting, neither race or ethnicity nor parental educational background explains variation in this activity.

What might explain this difference by gender? Once we also take into account users' internet experiences, we find that online ability is an important mediating factor in who shares content on the web. In fact, gender is no longer significant in the full model. This suggests that, if we compare a man and a woman of equal skill, they are equally likely to share their content online. This finding underscores the importance of considering people's online abilities in the context of their internet uses. Skill is related to how people engage with information and communication technologies inhibiting some from taking advantage of the many ways in which one can use digital media while supporting others in such pursuits.

Conclusion

Using unique data with detailed information about a group of diverse young adults' internet uses, we have shown that content creation in a digital age is not randomly distributed among a group of young adults. Our findings suggest that creative activity is related to similar factors as it was in previous times: a person's socioeconomic status. Students who have at least one parent with a graduate degree are significantly more likely to create content, either online or offline, than others. While it may be that digital media are levelling the playing field when it comes to exposure to content, engaging in creative pursuits remains unequally distributed by social background.

Looking at the especially novel aspect of sharing on the web, even when we control for creating content, we find that posting one's materials online is related to user characteristics. In particular, women are significantly less likely to share their creations on the web. Qualitative studies will be necessary to help unpack the particular reasons for this relationship of gender with sharing. We are able to examine the role of one possible intervening factor here: user skill. We find that web user ability mediates the relationship of gender and the online posting of a student's own content. Namely, once we control for skill, we no longer observe differences in posting between men and women. These findings suggest that refined measures of digital media use such as online abilities are essential for uncovering the nuanced ways in which people's internet uses are differentiated and have implications for social inequality.

In the age of digital media, traditional consumers of material can also become producers of content. However, our results suggest that a participation divide exists between those individuals who post their information on the web and those who do not. This variation is not randomly distributed among a highly wired group of young adults. As online content becomes increasingly important in setting social, political and cultural agendas, the existence of such a participation gap will have increasing implications for social inequality.

Notes

2   The authors of this article are not now nor have ever been affiliated with this university in any way other than in the context of this study. Focus on this campus is not due to convenience; rather, it is the result of careful consideration about what type of student population would be most helpful in addressing questions of interest in the research project.

3   What is depicted in italics here was underlined on the original survey.

4   The survey included a question verifying students' attentiveness to the questionnaire. A small portion of students (3.4 per cent) were identified as not paying attention to question wording, suggesting that they were checking off responses randomly instead of replying to the substance of the question. The responses of these students have been excluded from the data and analyses presented here, so as to minimize error introduced through such respondents.

5   Results are robust when the analyses are performed on the entire sample.

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QUALITATIVE INTERVIEWING IN INTERNET STUDIES

Playing with the media, playing with the method

This methodological paper addresses practical strategies, implications, benefits and drawbacks of collecting qualitative semi-structured interview data about Internet-based research topics using four different interaction systems: face to face; telephone; email; and instant messaging. The discussion presented here is based on a review of the literature and reflection on the experiences of the authors in performing completed research that used those four interaction systems. The focus is on functional effects (e.g. scheduling and other logistics, data transcription and data management), as well as methodological effects (e.g. ability to probe, collecting affective data, and data representation). The authors found that all four methods of data collection produced viable data for the projects they completed, but that some additional issues arose. Five themes emerged that form the organization of the paper: (1) interview scheduling and participant retention; (2) recording and transcribing; (3) data cleaning and organizing; (4) presentation and representation of data; and (5) the detection/presentation of affective data.

Keywords   Qualitative methods; online interviewing; email interviewing; IM interviewing

Introduction

As researchers consider using qualitative interviewing for their research, they are increasingly likely to use Internet media such as email and instant messaging (IM) instead of, or in combination with, more traditional interaction settings like face to face and the telephone. This is particularly true if the research explores an Internet-based activity such as e-learning or online community, where the research participants are already comfortable with online