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Edgar A. Burns 060139

La Trobe University, e.burns@latrobe.edu.au

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Responding to Student Reaction to a Simple Spreadsheet Exercise in a Sociology Undergraduate Class

Abstract

An individually assessed exercise used a spreadsheet as a simple organising tool to investigate refereed journal literature about communities in an undergraduate third-year sociology class. The spreadsheet exercise has proved to be a revelation in the responses of students being asked to undertake the assignment valued at fifteen per cent of total grade. This reaction to the teaching exercise has been consistent across several years the class has run, notwithstanding refinements from student feedback and other adjustments to achieve the pedagogical intention of the instructor. The article describes how the exercise challenges students to identify, list and organize the wealth of journal literature sources available in the intersecting academic fields studying communities, so they can later draw on this material in their main research assignment for the subject. Underlying assumptions of the teaching exercise include the belief that some minimal spreadsheet competence is today necessary for any professional, managerial or administrative workforce role, regardless of training domain in science, social science or humanities.

Keywords

digital literacy, digital numeracy, spreadsheet knowledge, undergraduate tertiary students, work ready education

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Cover Page Footnote

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1. Introduction

University managers and senior academics often speak of students as members of the digital generation, and enthuse about co-opting the digital revolution for university education. A larger problem than faddishness about digital trends is that such views inaccurately perceive, and instead presume, the nature and progress of student digital engagement. Instead, it is better to ask: what is known about how digital change is influencing primary and secondary school instruction? What is known about the digital competence/engagement of the cohort today entering university in their late teens [3], since digital learning or capability is “rarely seen as problematic” [18 p. 8]. These newly adult students coming into universities are “digital natives” mostly in a schematic sense [2, 11]. Debates about learning digital skills have shifted [4] as the presence of digital technology extends into all fields, involves diverse business and societal functions, and covers diverse geographical locations [26]. Part of the educational transition to meet these new learning needs involves instructors developing pedagogical tools to scaffold digital learning generally [31] on the one hand, but also assisting students to learn specific digital competencies such as spreadsheet use, on the other hand [1, 2, 31].

1.1. Issues in achieving digital competence

The on-the-ground reality of undergraduate digital technology competence is a different question from the “gushing” style of much promotional or aspirational talk [29]. Several issues make digital competency problematic and variable between different student groups. For example, (1) “digital divide” issues for students from poorer suburbs and neighbourhoods, regions or countries [4, 5, 8, 30]; (2) differences between arts and science students’ comfort with digital technology use and perceptions of mathematics difficulty [20, 23, 26, 34]; (3) gender bias, gender preference, or exclusion [15, 28, 32]; or (4) for many current students, digital familiarity is substantially limited to social media such as Facebook, Instagram, Snapchat and Twitter.

It is mostly in the social media senses that the “always on” generation shows it is digitally native, having never lived in a world without cell phones in hand, or near-at-hand [4, 14]. Such knowledge and experience, however, has only limited relevance to tertiary learning involving the suite of software formats and platforms, digital skills and technological competencies that will make these students employable. These skills need to be learned and mastered successfully as part of negotiating their university experience [18, 27]. Preparing word documents, spreadsheets, and accessing webpages are the most basic forms of this workforce digital literacy [13].

1.2. Assumptions about digital literacy

Thus, even today the assumption that oncoming generations of undergraduates are computer literate, or digitally “savvy”, or that technology is simply a good thing in some generic way, is an unhelpful generalisation. From Selwyn’s discussion of such limited thinking he summarises this as “a general failure to think carefully about the social nature of digital technology” [29]. Even valuable discussions of education and

technology may be too wide in their ambit to guide learning about specific digital literacies such as spreadsheet use [16]. Overall, then, from whatever causes, these limitations or lack of digital capability present obstacles, and hence opportunities, for both students and front-line teachers attempting to incorporate digital modes into classes. As noted above, students are by no means uniform in their digital skills, having a mix of good skill levels in some respects, but unfamiliarity or lack of knowledge of other basic areas of digital practice.

1.3. An arts/science divide?

Little research has been reported about teaching methods or practices incorporating spreadsheets within the arts and humanities fields, though teaching practice developments continue in many other fields. In this journal, *Spreadsheets in Education*, for example, no articles out of 144 articles across almost a decade and a half, refer explicitly to Bachelor of Arts (BA) in the article title; only a few can be said to focus on content areas for disciplines in the BA/Arts and humanities [2, 11]. I have identified one Australian journal having an article that does refer to Bachelor of Arts: Lawson and Matos in 2000 [20]. Lim's 2005 study is a rare example of a study of disciplinary differences that included BA/Arts students [23], finding that:

Students enrolled [at the campus of one Australian country town]... in the Faculties of Arts, and Education, and female students in the Faculties of Health and Behavioural Sciences, and Science and Technology, report having the lowest levels of spreadsheet skill. (p. 77)

Searching the Australasian Journal of Educational Technology's 177 issues across its 32-year archive identifies 62 in-text references to "spreadsheet" (some minor, some major), within about 1,000 articles. Several other articles in that journal usefully discuss transferable teaching and learning practices.

An unknown but significant proportion of the student cohort enrolled in Bachelor of Arts (BA) courses and programs wish to avoid numbers, mathematics and other forms of learning that are perceived by them to involve calculation. This has received long-standing commentary and is part of the broader issue of teaching mathematics [9, 12, 21]. This attitude often includes a belief that numeracy is aligned with mathematics, science and scientific fields, and is somehow difficult to master. Some BA/Arts students are, however, equally good in mathematics as they are in writing and analytic skills [34]. Psychology and health students, for example, are expected to gain some proficiency in statistics. Lim further observed that [19]:

Although students in business-based and science-based disciplines are perceived to have a greater need of spreadsheet competency, Lawson and de Matos [20] showed, even at the turn of the millennium, that a good level of spreadsheet competency is also required of graduates in the arts and in education. Today, employers of graduates from all disciplines are demanding their future employees have competency in the use of spreadsheets [27].

Spreadsheets in themselves are not solely mathematical. One of the brilliant things about spreadsheets is that they do the "heavy lifting" of calculation, precisely and consistently, leaving the person using the software to think about questions and meanings the data is intended to address. But many BA/Arts students appear to have

a conjunction in their minds that spreadsheets and “science”/“math stuff” go together, and they transfer phobia of mathematics to fear of spreadsheets as well [22].

Yet spreadsheets are also highly relevant in social and people-oriented fields. For instance, Castellano’s work with prison inmates showed caseworkers needed to be able to talk about risk management and show spreadsheet competence presenting proposals [7]. Boss showed the power spreadsheet data has when transformed into visual forms identifying “potential racial profiling hotspots” in policing [6]. Conventional boundaries between disciplines dissolve or are re-positioned by new technological innovations adding value in analysing problems in different fields, bringing commonality of treatment using spreadsheets. Big data extends this much further.

2. Simple spreadsheet Scoping Exercise in sociology undergraduate class

This section sets out the instructions for students to complete this exercise. It was called a Scoping Exercise—not mathematical—intended to organise, sort, and think about a database of publicly listed academic journals on the subject of “community”.

Scoping Exercise

There are three parts (1, 2, 3) to this assignment, worth equal marks.

General guidelines:

We will begin discussing and working on this in class to give you a head-start.

- In Part 1 prepare your spreadsheet tables as Excel™ tables and then paste them individually into a word document, using the departmental rules of academic practices of numbered tables, correctly positioned titles, and appropriately specific titles. Your page layout is to be portrait not landscape orientation. Part of the Scoping Exercise is to adjust table sizes and shapes and column and row widths to fit well into conventional A4 pages.
- The tables must show evidence of having been prepared in Excel, pasted into Word, and resized to fit nicely one to each page. No colour please, just black and white. No additional charts are asked for. We can experiment in class with copying and pasting spreadsheets into a Word document.
- The internet has many excellent short video clips on how to do many of these steps, so it is a good skill to train yourself to find answers and suggestions this way. Bring questions you have about doing this assignment to class.
- The usual essay/ assignment rules apply to this Scoping Exercise, such as page numbers, margins, front page of the exercise with title and name and subject details.
- Hints about details in setting out tables, and learning how to work with Excel spreadsheets will emerge as we talk in class about this assignment.

- The three parts are worth equal marks (see last point at end of these instructions). Think about what this means for the effort you should put into the second two parts as well as working out the tables in Part 1.
- Upload the finished Scoping Exercise document to *Turnitin* (plagiarism detection software) on the university's Subject webpage.

Part 1 of 3

1. Download the ERA 2015 journal list [10].
 - Find it at the Australian Government Australian Research Council website—Excellence in Research for Australia (ERA) Initiative at: <<http://www.arc.gov.au/era-2015-submitted-journal-list>> send look for list of journals.
 - The ERA list is in the form of an Excel spreadsheet. There are about sixteen thousand journals in this list. It may take a while to download unless you have a fast internet connection. If you do not have a home internet link or your home connection is too slow, this can be done on campus and saved to your computer, a disk, or to a portable USB.
2. **Make Table 1:** Search through the list for all journal titles with the word “community” or “communities” in them. Make an Excel (not Word) table with the journal titles written out in full; give the file a name like you do for essays and save it.
 - Supply a meaningful table title, column headings and the total number of journals found.
 - Place a grid line around all the cells in the table.
 - Whatever order you gathered the titles, now sort the journals alphabetically. This can be done by selecting the “Sort” function for the journal column.
 - Have a number column on the left-hand side of the table.
 - Insert the file name at the bottom of the excel document.
 - Insert the current time date and time somewhere near the bottom of the page, by entering the NOW() function.
 - Spend a few moments adjusting the cell sizes, font sizes, etc. so that your table neatly fits on as few pages as possible.
3. **Make Table 2:** Study the journal titles, perhaps recent online articles in the library databases from those journals, and perhaps the journals' home pages online. From this, create a typology of different kinds of community/ies, in a second properly titled table.
 - Your typology should have no more than half a dozen categories or types.

- The table should have two columns, with headings. Rows should be numbered 1, 2, 3..., and each row will have a type name.
4. **Make Table 3:** Create a third table, by copying the first one. Modify it as follows:
 - In a third column of your table enter the appropriate type number beside each of the journals you have found.
 - You will also need to re-number the table title, and rename it. Then do a “sort” on this third table, sorting on column three. This will mean all the ones will come to the top, the twos next and so on.
 - Insert a row into the table at the start of each change of number, and in the new blank row write the title you have created for that cluster of journals.
 5. **Make Table 4:** Create a fourth table by copying table two. Now add two more columns. In column three place the totals for each type or category of journals you have identified. In column four insert the per cent of all the community/ies journals for each type. Then using an extra total row below these types, provide totals for columns 3 and 4.
 6. For tables one and three, turn on the “repeat headings” function so that when the table continues over to a second page, the row headings still appear on the new page and are clear for readers to follow.

Part 2 of 3

7. Using about one page, discuss the **typology** you have created. What does it tell you about research into community/ies? What kinds of communities are there out there? What are the methodological problems you found in trying to “boil down” the many journals into half a dozen types? How does using a spreadsheet help organise the material?
8. Although there are less instructions for this stage, remember it is of the same value as the other two, so some thought and reading about the purpose of typologies will give you a chance to add a lot of difference in your answer than just a few notes.

Part 3 of 3

9. Again using no more than one page, list in the correct [Harvard/APA, or other] referencing format, **five articles** from the above set of journals you have identified. Each article must be from a different journal. You may select all of them from one of your types that you described earlier in table two if you wish, but state that. Your page will be set out as follows:

- The first reference in the required style, then starting next line write a paragraph about the article. Not an abstract, but a new idea you found, a debate, or an interesting application of a theory or method.
- Then do the same for the next three articles.
- Your discussion of the fifth and final article is a little different: Describe how some part of the article agrees with or challenges another article or book, or class discussion. You may view it negatively or positively, depending on your views and what you have found.

10. Each part of this Scoping Exercise is worth equal marks. Most students will spend most assignment time sorting out Part 1 creating the tables. However, Part 2 consisting of one page of writing, is worth the same marks. Thus, it is worth digging deep to think about and write down clearly on the page issues and theories about how typologies are made and what are the inherent limitations of them, etc. in terms of what you did in Part 1).

3. Designing the Scoping Exercise

When I first started teaching this subject five years ago, Sociology of Communities required a new contemporary framing. As instructors do, I spent time reading relevant literature, looking for examples that could be used as readings, and seeking ways to make the subject an active and worthwhile learning experience for students. I was also examining *Excellence in Research for Australia's* (ERA) spreadsheet lists published in 2010 and 2012 of approved academic journals. These spreadsheets were at that time publicly available on the ERA website. Between the two iterations of these nation-wide research spreadsheets listing academic journals, the controversial A-B-C rankings were dropped and about 2,000 journals were added, making a total list of approximately 22,000. In utilising this academic research listing for my teaching purposes, I was only interested in the primary column containing the precise names of the many thousands of journal titles recognised in Australia.

3.1. A ready-to-hand and relevant database source

These ERA spreadsheets [10] were used in preparing the present Sociology of Communities class Scoping Exercise, instructions detailed above, as relevant, public, quality, and conveniently available material for students to use. For other countries, similar national or international databases would work equally well. Put simply, the Scoping Exercise required students to download and search the government spreadsheet, then select all journals that had the words “community” or “communities” in the journal title.

Why create this spreadsheet Scoping Exercise?

1. Experience in professional and business life means I consider that basic spreadsheet competence, directly parallel to document writing competence, is an essential ingredient of being useful in a workplace. My own institution's current by-line is that students should be “work ready”. Without suggesting

education is merely instrumental, but has a value in its own right, I nevertheless believe that even in BA/Arts and humanities, not only business, science and engineering, there are substantial ways that spreadsheet capability can do tasks faster, more efficiently, more extensively, and more effectively.

2. Constructing a new third-year undergraduate arts subject reflected my own concern to identify library material students could use in writing their research assignment. Sociology of communities intersects several related fields and academic areas: rural development, health communication, social theory, politics, among others. My own research downloading these journal titles came from preparing to teach this new subject. Why not get students to do this themselves as active learning?
3. Pedagogically, integrating learning in new ways for richer learning and better value for time spent using the “simple idea” [17, 19] of a spreadsheet Scoping Exercise, promised a combination of thinking and doing. Thus, (1) organising resources through typology-making and reflecting on this; (2) gaining elementary spreadsheet familiarity; (3) collecting evidence of the wealth of material accessible for the research assignment; (4) and some preliminary investigation of specific sources of interest, seemed a pedagogical win at several levels. The Scoping Exercise aimed at providing students with minimum spreadsheet capability. Clearly, technologically skilled students could do this in more proficient ways, and did not need to rely on the staged sequences of the assignment.

3.2. Early indications of student anxiety

Undergraduates quite often defer the preparation for the later assignment. This eventuates in needing to complete most if not all the final major assignment of 1-2,000 or more words within a day or two of due date. At that late stage students come to the lecturer saying things like, “I can’t seem to find anything on this topic”, or “I’ve spent X amount of time looking for references, and there is nothing written on this subject”. Sometimes they say, “Where will I go to find stuff on this topic?” —a day or two from hand-in time! Even serious and hard-working students have some of these issues as they look for information on assignment topics. This spreadsheet Scoping Exercise addresses both these intertwined digital literacy problems—procrastination and searching databases—without needing to distinguish students’ level of engagement, but also putting the work back onto them using their own preliminary work in the exercise.

3.3. Database digital competencies needed

Database searching has today become a necessary undergraduate digital skill: locating assignment material in university library electronic databases, and on the internet. Not long ago even post-graduates were still paper-based or library catalogue based, but electronic academic journals are now standard, and increasingly ebooks are becoming so. This is of course, one of the wonderful things about the digital era, that a rich variety of content is available in these databases. For students entering this world as

undergraduates, this information at their fingertips, however, it can seem very confusing and opaque, not inherently “digitally native” to them. University libraries partner with database publishers and control access to students and staff only.

This Scoping Exercise addresses these two issues: first, engendering a small amount of largely non-mathematical spreadsheet competence amongst undergraduate BA/arts students; and second, assisting students’ realisation as they work with a block of internationally reputable academic journals, that there is a huge amount of articles available on the subject of communities. Realistically, some students do not “get” the abundance they have uncovered. But it is a pleasure to see better students, having overcome these potential barriers—of not having any spreadsheet competence; and not realising they can find and organise literature resources—now learning they have ample material from which to assemble an argument, or describe a situation, process, or issue as it relates to their community of interest.

3.4. Students not “getting” they have the solution

It may assist readers to see the simple calculation of how much material students discover they have available at their fingertips as they complete this Scoping Exercise. In 2012 the ERA spreadsheet had about 22,000 journals of which some 65-70 refereed journals have the word community or communities in the actual title—this term being the central concept in this Sociology of Communities subject. Journals publish several issues a year. Using an average of four, this means that this body of journals produces approximately 250 issues each year. Further, estimating five articles in each of those issues adds up to about 1250 articles per year. Thus, even one decade of community journals produces between 10-15,000 articles. Students faced a different issue than a generation ago when finding refereed articles was the difficulty. The opposite problem applies today: the task is to find tranches of literature broadly relevant and then winnow those down to more closely relevant items.

What the Scoping Exercise does is avoid asserting these matters to students, rather providing a spreadsheet heuristic for self-discovery: what a rich trove of information they have available only a few clicks away. But the ERA spreadsheet is merely an index to this information. Only a small proportion of these many peer-reviewed journal articles are freely available on the net. Most are restricted and can only be accessed through the university’s library databases. To complete each of the three parts of the Scoping Exercise, students need to locate and analysis the content of these database journals by inspecting articles within the databases. The exercise helps differentiate student performance—a pedagogically important function in the design of assignments—allowing students who engage the material and make use of it to achieve high marks compared to students who do not make adequate use of the material the Scoping Exercise discloses.

4. Spreadsheet Teaching into BA/Arts

A variety of journals and websites provide examples of teaching with spreadsheets in various professional/disciplinary situations (not meaning advanced computer software skills, nor coding). The journal *Spreadsheets in Education* is entirely devoted to

spreadsheet use in various formats and disciplines. The present article furthers the intention Baker and Sugden [2] affirmed in the first issue, that the journal be:

a springboard from which others may develop their own applications and reports on educational applications of spreadsheets. For despite its rising popularity, the spreadsheet has still a long way to go before becoming a universal tool for teaching and learning, and many opportunities for its application have yet to be explored. (p. 1)

Two orientations to spreadsheet teaching can be identified: first, teaching spreadsheet use as a *subject* to develop skills to be used in various training and subsequent work environments; spreadsheets themselves being the content or subject matter. Second, using spreadsheets to *achieve other teaching and learning*, not about spreadsheets as such, in a lab, fieldwork, summarise data, develop graphs and charts, etc. In these latter cases, spreadsheets are only indirectly part of the learning subject matter at points where a new skill or technique is added to assist the primary discipline focus.

Vacher and Lardner observe from their extensive project workshops program that [31]:

Spreadsheets offer a readily accessible cross-disciplinary platform for dissemination of numeracy. The appeal of modules that prompt students to build spreadsheets to solve problems was apparent throughout the project. (p. 18)

Their Science Education Resource Center website, *Spreadsheets across the curriculum* (SSAC) at http://serc.carleton.edu/sp/ssac_home/index.html shows this happening with a new generation of students in many areas of academic inquiry. Vacher and Lardner list “non-maths courses identified in requests for instructor versions” of their spreadsheet curricula developments (Table 3B, p. 16) [31]. But sadly from a BA/Arts point of view, no social science or humanities subject spreadsheet exercises were reported.

To observe this absence is no criticism of the importance of what Vacher and colleagues have achieved or the added value their work has brought extending the use of spreadsheets in the fifty-five learning modules they developed. The present sociology Scoping Exercise, using a spreadsheet as a simple tool to organise material, is an endorsement of continuing their work. Any spreadsheet use by BA/Arts students is a small start addressing this gap.

Meyer and Avery [25] show a way of deploying spreadsheets that is congruent with the effort described here. An absolute minimal numeracy, the opposite of students’ fears of engaging equations, enables leaps in students’ ability to manage large amounts of material and simplify the task of analysis. Mays [24] takes spreadsheet learning into a business math subject redesign; the effectiveness of organising the mathematics content feels consistent with the present goal of enriching inquiry. Despite BA/Arts students often shying away from mathematics, Mays’ spreadsheet exercise makes accessing data and managing it, keys to any student inquiry and learning.

5. Managing anxiety doing the Scoping Exercise

Over several years of running this sociology class I have found new ways each year to downplay some BA/Arts students’ reaction when given this assignment involving spreadsheets. Even with the carefully sequenced steps that this Scoping Exercise

follows, considerable class management is required to assist anxious students to complete it. Anticipating spreadsheet anxiety to address student anxieties is part of this: enthusing doubtful students, “buddying” students together to support one another, showing positive examples and gains achievable using spreadsheets, all contribute to many students overcoming their initial concerns.

5.1. Combining Spreadsheet Part 1

The spreadsheet Part 1 of the Scoping Exercise is only the first of three parts, and it involves students creating four tables. The first two tables are repeated in tables three and four, incrementally adding more details. Students assemble this data about the Sociology of Community/ies literature available to them, then are tasked with grouping these new-found resources into 3-5 “types” or categories to create a typology. Then students are required in Parts 2 and 3 to analyse the types and the typology, as well as describing the process of researching and categorising evidence in this literature.

The present Figure 1 below here is composed of four examples from student work preparing the final table in the Part 1 series of four tables they are asked to create, using a step-by-step procedure to assist successful achievement. While relatively easy for those with some confidence, the spreadsheet steps can be done more slowly but still successfully for those needing to constantly check on their own progress.

Table 4: ERA 2015 Community/Communities Journals List Typology Totals

No.	Typology Title	Typology Total	Typology Percentage
1	Health and Well-being	23	42%
2	Development and Engagement	16	29%
3	Families and Children	2	4%
4	Law and Justice	5	9%
5	Planning and Design	1	2%
6	Other	8	15%
Total		55	100%

Typology Number	Typology Name	Typology Total	Typology Percentage
1	Community Psychology	7	13%
2	Community Planning and Management	7	13%
3	Community Engagement and Development	11	20%
4	Community Health	16	30%
5	Research of Communities	7	13%
6	Community Justice and Law	6	11%
		54	100%

ERA Journals Relating to Community 2016, by Categorical Number with Totals and Percentages

Category Numbers	Categories	Total Journals in Category by Number	Total Journals in Category by Percentage
1	Health and Families	26	47%
2	Arts and Culture	9	16%
3	Sciences	4	7%
4	Law and Justice	6	11%
5	Infrastructure, Planning and Environment	6	11%
6	Education and Employment	4	7%
	Totals	55	100%

Table 4: Number and percentage of articles in each category

Number	Typology Categories	Number of articles in category	% of articles in category
1	Providing healthcare/ assistance	11	20
2	Educating/disseminating information	18	33
3	Study of policy, law, security	7	13
4	Study of people and environment	19	35
	Totals	55	100

Figure 1. Student examples of Scoping Exercise Part 1 final Table 4

5.2. Spreadsheet Process Part 2

Part 2 of the Scoping Exercise builds from class interaction doing the spreadsheet work by getting students to describe their attempts to analyse four or five topics into which they sorted community/ies journals. It is not a matter of being right or wrong but demonstrating skill in explaining why, given their interests and other knowledge, that they have done the thinking work of creating categories or types. Do they:

- Justify their selection of the main types of journals?
- Check individual journals to learn what a given journal is about beyond the journal title?
- Show they have resolved ambiguous titles in allocating journals?
- Recognise a typology is a reduction that simplifies but also ignores some features?
- Change or modify their initial categories in consolidating types?
- Show insight that real data needs reduction, organisation, and how typologies reflect perspective and research purpose?

Often the constraints of organising scores of journals into 3-5 types is perceived as an annoying or trivial problem for lower performing students. Higher performing students, however, make notes in this Part 2, accepting the necessity of simplifying the complexity of scores of diverse journal titles. They see that the spreadsheet assists them in completing this task and is something learned that they can use in other situations.

Figure 2 below illustrates one student working through the successive stages in Part 1 of the Scoping Exercise. The top of the present Figure 2 shows the final lines of the student's first table; then his table 2's incremental change; in turn followed by the application of his second table to the original data and sorting the journals by title in a typology of "community" academic literature in the third table. This student finally in Part 1 produced a fourth table not shown here, similar to the four shown in the present article's Figure 1.

Number	Journal Title
53	Social Work with Groups: a journal of community and clinical practice
54	The International Journal of Adult, Community and Professional Learning
55	Therapeutic Communities: the international journal for therapeutic communities
SOC3COM 2016 Scoping exercise table 1	
30/06/2016 11:23	

Table 2: Typology types and coding numbers

Typology coding Number	Typology Categories
1	Providing healthcare/ assistance
2	Educating/disseminating information
3	Study of policy, law, security
4	Study of people and environment

Table 3: Selected journal articles coded to Typology categories

Number	Journal Title	Typology coding number
Providing healthcare/ assistance		
1	American Journal of Community Psychology	1
6	British Journal of Community Nursing	1
9	Community Dental Health	1
10	Community Dentistry and Oral Epidemiology	1
14	Community Mental Health Journal	1
15	Community Practitioner	1
21	Health and Social Care in the Community	1
22	Indian Journal of Community Medicine	1
33	Journal of Community Health Nursing	1
47	Primary Care and Community Psychiatry	1
52	Sexuality and Disability: a journal devoted to the psychological and medical aspects of sexuality in rehabilitation and community settings	1

Figure 2. An example of the stepped process of Scoping Exercise Tables 1-4

5.3. Content in Part 3

Part 3 of the Scoping Exercise gets students to identify and write a paragraph about each of five articles found by looking within journals identified during the first stage of spreadsheet analysis. It elicits reflection from students how those articles can assist their major project due near the end of the course. Potentially this pulls students away from last minute efforts, and gets some preparation work started early.

6. Conclusion

I continue to use this spreadsheet Scoping Exercise because of the benefit it offers of getting into the psyche of students and addresses fears about spreadsheets. Many of them would otherwise, continue through their BA/Arts degree with little insight about the importance of spreadsheet competence for their future work and personal competence in our digital age. By helping them to avoid sleepwalking their way past

spreadsheets in their social science or humanities or health degrees, this is a real contribution to them, even if not immediately appreciated! What Lim observed [19, 23 p. 81] remains the case: for students enrolled in the Faculties of Arts, and Education

Employers of arts and education graduates require their new employees to have spreadsheet skills.

The pedagogical skill, of course, is to help BA/Arts students extend their capabilities beyond being blocked by feeling it is too difficult. Despite the very staged nature of the spreadsheet Scoping Exercise which steps students incrementally through the four tables, each building on the previous stage, it is still worthwhile helping BA/Arts students negotiate the sense of challenge to their sense of self-competence or self-efficacy in having to do this.

Centrally important for these non-science students is beginning knowledge/experience about spreadsheets and some “wake-up” information on what spreadsheets can do. That is, spreadsheets are powerful, fast and efficient, though the richness of spreadsheets is barely understood by them. In career terms, understanding a colleague or employee describing their use of spreadsheets in their work—even if it is not the primary work area of the social science or humanities BA/Arts graduate—increases professional communication.

Retreating into caring work, sometimes stereotyped as “women’s work” (the gender dimension to spreadsheet fears is not explored in the present article), is less likely to be effective in the future for avoiding using spreadsheets. Government employment, non-government organisations (NGOs), caring work in health, social work or various therapeutic professions frequently use basic spreadsheet functions of data entry and graphs to achieve totals of time or cost, to categorise and to generate invoices, receipts, statements, proposals and budgets. Spreadsheet familiarity is simply basic for professional and administrative work today, for either gender, and at any age from young to older.

C.P. Snow’s 1959 lecture famously described the modern development of two educational cultures that did not seem to communicate to each other [33]:

He spoke of scientists who could scarcely struggle through a [popular novel], but more importantly of humanities professors who were ignorant of the Second Law of Thermodynamics, who sneered at science as an inferior branch of learning that no really cultured person needed to trouble with. ‘If the scientists have the future in their bones,’ he claimed, ‘then the traditional culture responds by wishing the future did not exist’.

Naming this split turned out to be highly provocative and Snow was sharply criticised in some quarters. However, the advent of digital technologies such as spreadsheets reopens the debate between human/people/culture disciplines (humanities and social sciences) and science/technology ones today.

The present sociology Scoping Exercise is a one small attempt to see the benefits of spreadsheet use taught and developed further in non-science disciplines. The uptake of the Vacher and Larder [31] project described earlier can be viewed positively as indeed rolling out great educational examples of spreadsheet skills to many more disciplines. It might also be viewed somewhat despondently in that more examples of humanities and social science spreadsheet use have yet to be reported in the teaching

literature. As Selwyn [29 pp. 90-1] noted, it is desirable to advance the “case for taking both the technological and the social seriously”.

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