The value of literacy practices

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The concepts of literacy events and practices have received considerable attention in educational research and policy. In comparison, the question of value, that is, 'which literacy practices do people most value?' has been neglected. With the current trend of cross-cultural adult literacy assessment, it is increasingly important to recognise locally valued literacy practices. In this paper we argue that measuring preferences and weighting of literacy practices provides an empirical and democratic basis for decisions in literacy assessment and curriculum development and could inform rapid educational adaptation to changes in the literacy environment. The paper examines the methodological basis for investigating literacy values and its potential to inform cross-cultural literacy assessments. The argument is illustrated with primary data from Mozambique. The correlation between individual values and respondents' socio-economic and demographic characteristics is explored.

Keywords: literacy practices; values; weighting; Mozambique

1. Introduction

In recent years the concepts of literacy events and practices have received considerable attention in educational research and policy, particularly in ethnographic research. The New Literacy Studies has championed the idea of literacy as a plural phenomenon involving heterogeneous practices, texts and events (see Blommaert 2008; Collins and Blot 2003; Street 1993). Barton and Hamilton (2000) describe literacy practices as the 'basic unit of a social theory of literacy' (7). They are understood to involve the social uses of literacy in a 'recurrent, goal-directed sequence of activities' (Scribner and Cole 1981, 236). Though literacy practices are shaped by globalised technologies and institutions (Gee 2004; Kress 2003), they nevertheless retain immense diversity within and between societies and over time. This has had significant implications for literacy teaching and assessment, which must recognise diverse and changing uses of literacy. This includes investigation into literacy use in educational settings and how that relates to wider social uses of literacy (e.g. Heath 1983; Street 2006). Politically speaking, the

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study of literacy practices has involved what can be called 'advocacy projects'. That is, educational research that seeks to 'represent' the heterogeneity of literacy practices within and between social groups and to question the privilege that is awarded to dominant literacies in literacy teaching and assessment (Blommaert 2008; Hamilton 2001; Street 2011). As Street (2011) has recently argued, the power to 'name' and 'define' literacy practices is an integral part of literacy policy and practice. It is therefore surprising that comparatively little empirical attention has been given to questions of value: 'Which literacy practices do people most value?' This, after all, is one of the questions that should shape any political process of advocacy.

The recent trend toward large-scale, globalised projects of literacy assessment (e.g. IALS – International Adult Literacy Survey, PIAAC – Programme for the International Assessment of Adult Competencies, LAMP – Literacy Assessment and Monitoring Programme) means that it is increasingly important to understand which literacy practices are most valued across and within different populations. Large-scale assessment projects are inherently cross-cultural and inter-cultural in character and involve normative decisions about which literacy practices and texts are or should be valued. In such projects, the literacy practices and abilities of different populations are integrated into what Rizvi and Lingard (2010) call a 'global field of comparison'. Researching literacy values therefore has the potential to introduce an important source of knowledge to widen democratic debate and inform literacy policy.

This paper is a contribution to that process and builds on interdisciplinary collaboration between ethnographers and economists that integrate the ethnographically informed practice model of literacy into quantitative research (Basu, Maddox, and Robinson-Pant 2009; Esposito, Kebede, and Maddox 2011; Maddox and Esposito 2011). Building on Street's (2011) argument, the aim of the paper is to make a step towards the quantitative investigation of the importance people attach to different literacy practices. Our belief being that a better understanding of how literacy practices are valued can provide an empirical and democratic basis for improved decisions in educational policy and practice. We show that the value people attach to literacy practices can be elicited by means of a simple technique, which we implement in a context of low education in the poorest region in Mozambique. Further, we illustrate how statistical analysis of observed importance scores can shed light on the relationship between personal characteristics of respondents and the importance attached to different literacy practices – for example the valuation of the ability to help children with homework decreases with respondents' age and increases with number of children.

The paper is organised as follows. In Section 2, we present current debates over methods for examining value and make the case for the adoption of the so-called Budget Allocation Technique. In Section 3, we

describe the implementation of this approach with 286 adults in a context of low levels of education in Mozambique. The case study employs an innovative and practical approach to weighting involving simultaneous valuation of multiple literacy practices. Section 4 describes our primary data using bivariate and multivariate statistical analysis.

2.   Researching value

Ethnographic research on literacy tends to approach questions of value in terms of description of people's literacy practices and their testimony about such practices. In that way, for example, we can come to conclusions about the status of letter writing and religious literacy practices of the Nukulaelae in Polynesia (Besnier 1995) or Vai economic correspondence in Liberia (Scribner and Cole 1981). However, in many cases, people are involved in multiple types of literacy practices in their daily lives. In those cases it is useful to be able to distinguish between those practices that are most highly valued and those that are viewed as less valuable. In practice, educationalists and policy makers often make such decisions implicitly, so, for example, to rank engagement with Shakespeare more highly than reading comic books.

However, the application of the concept of literacy practices for measuring value and the choice of appropriate techniques and methodology are not unproblematic. Firstly, the concept of literacy practice is inherently qualitative and normally supports in-depth ethnographic accounts of literacy as social practice. The choice of a numerical mode of investigation and representation might therefore appear to challenge its founding principles, in terms of viewing literacy as a complex, contextually embedded social practice (Gee 1999). What we offer here is necessarily more partial than ethnographic thick description. Secondly, there is a concern that processes of quantification – viewing 'literacy as numbers' – are methodologically opaque and lack researcher reflexivity (Hamilton 2012; Street 2011). This includes concern with the power to name and classify literacy practices, the telling influence of their statistical procedures and the way results are interpreted (Street 2011). With those concerns in mind, our choice of a quantitative method as an 'inscription device' (Latour and Woolgar 1979) for turning values into statistics and then into conclusions will be discussed in some detail.

Social and medical sciences employ a variety of methods for ranking multidimensional characteristics associated with wellbeing, quality of life, deprivation and capabilities. Knowing which dimensions of wellbeing are more important to people can provide policy makers with valuable information on how to allocate scarce resources among education, health, security and so on. In terms of wellbeing assessment, at least since John Rawls' (1971) influential 'Theory of Justice', it is clear that any multidimensional index is faced with a

choice over the relative weights to be attached to different domains – this is known as the 'index problem' (for details see Hockett and Risse 2006). The rationale for using unequal weights in a multidimensional index is, indeed, to capture variation in the importance of the different dimensions of the phenomenon under study. That the more important dimensions should be recognised, and be given more weight in composite indexes, has a straightforward appeal.[1] How can we apply these ideas to investigate the importance people attach to different literacy practices?

The customary approach to eliciting value is to use Likert scales, where respondents are asked to sequentially rate the importance of different dimensions (one after another). Respondents rate each dimension along a numerical or a verbally described scale – for example from 1 to 10 or from 'not at all important' to 'extremely important'. When these types of methods are used, importance scores for each dimension are provided in isolation in the sense that the value attributed to previous dimensions can serve as a benchmark only insofar as the respondent is able to keep them in mind – an onerous task for many and, in particular, for respondents with low education. This way of eliciting value is far from ideal since importance scores make little sense on their own. This is most evident when domain-specific indicators are combined into a multidimensional additive index, that is, an overall index taking the form of a weighted average of those indicators. As illustrated by Decancq and Lugo (2013), weights directly affect the marginal rate of substitution among dimensions within the index, that is, to what extent an improvement in one domain can compensate for a worsening in another domain. As a consequence, not only may the cardinal content of reported scores be inaccurate, but also the resulting ranks among dimensions may turn out to be flawed. Further, it is well known that scores picked up by respondents on such scales are affected by scale biases – in other words, different individuals may systematically choose scores up or down the Likert scale even in the case of similar valuation (see Holland and Wainer 1993; Kahneman et al. 2004).[2] Aware of these problems, we use the methodology known as 'Budget Allocation Technique' – see Moldan and Billharz (1997) and Mascherini and Hoskins (2008) – where the respondent is invited to allocate a fixed number of tokens across a predetermined set of dimensions. Two aspects of this approach are worth mentioning. First, the respondent is presented at once with the whole set of dimensions to be assigned value – in this way the attribution of importance scores takes place simultaneously. Second, since the number of tokens to be allocated is fixed across subjects, the problem of individual scale biases does not apply: differences in revealed importance scores can be ascribed to different relative importance attached to the selected domains. Similar considerations motivated the approaches used by Camfield and Ruta (2007), Hickey et al. (1996), Ruta, Camfield, and Faith (2004), Ruta, Garrat, and Leng (1994) and Wagner (2004) for the evaluation of quality of life. It must be

acknowledged that the budget allocation technique is not without limita-
tions. While the fixity of the number of tokens enables differences to be
elicited in the relative importance attributed to different domains, it does not
enable distinguishing, for example, between a person with moderate values
on all domains and a person with high values. Further, this approach might
encounter pragmatic difficulties when applied to a large number of domains,
due to the complexity of producing a simultaneous evaluation of numerous
domains – this is less of a concern if the targeted population is highly edu-
cated, for example, experts. It follows that for respondents with low educa-
tional levels, the analysis of value attached by single individuals through
the Budget Allocation Technique should concern a small set of domains –
we would say up to six or seven. We believe the above limitations do not
affect greatly our work because, firstly, we in this study are not interested in
determining which personal characteristics foster a stronger or weaker valu-
ation of literacy, but in which characteristics affect the relative appreciation
of literacy practices (i.e., one against the other). Secondly, we focus on a
restricted number of literacy practices that have emerged as being highly
valued in the social context we target.

While the Budget Allocation Technique has been so far used only to
elicit the value judgements of 'experts' (academics, policy makers and
educationalists), the case study below is based on an instrument devised for
a context with low levels of education in Mozambique – in particular, we
used flashcards with visual representations of literacy practices. In this way,
we follow the invitation of Copestake and Camfield (2010) to devise
approaches that are adapted for less educated respondents.

3. A case study from Mozambique

A literacy survey of 286 adults was conducted between March and May
2008 in the urban area of Maxixe, the largest city in the Inhambane
province, which is the poorest region of Mozambique according to the first
and second National Survey of Household Groups on Living Conditions
(IAF 1997–1998, 2002–2003). All interviews were carried out by one of
the authors, with the assistance of a trained translator, who would intervene
when the interviewee would want to express some concept in Xitsua rather
than in Portuguese. The sample coverage was designed to have clear-cut
occupational sub-groups and occupations with low expected educational
levels. Half of the sample was people whose primary occupation was as
market or street traders, farmers were the next largest group, followed by
fisherfolk and porters (cart pullers). The sample also contained a small
number of cobblers and sailors (ferry workers). Approximately three fifths
of our sample were males and aged from 17 to 66. The average years of
schooling was 3.6 and this included 51 individuals who had never attended
school. Exact occupational breakdowns can be found in Table 1, while full
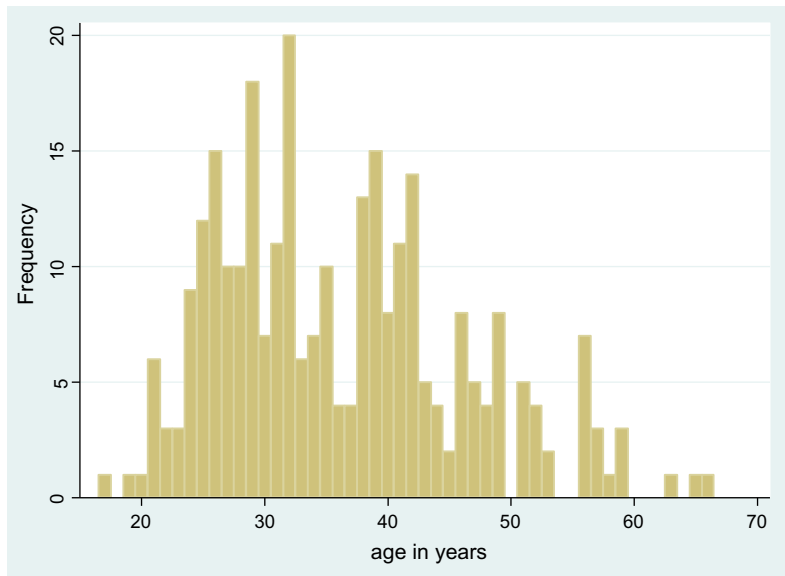
Figure 1. Distribution of age.

information on the distribution of age and years of schooling is provided in Figures 1 and 2, respectively.

The first part of the interview gathered information on an array of demographic variables. The valuation activity took part at the end of each interview. Respondents were presented with five flashcards, each representing one of the selected literacy practices. The five flashcards were produced by an assistant with considerable experience in that cultural setting, and careful attention was paid to ensuring that the pictorial representation would closely recall concrete literacy life experiences – since the object of the representation was the simple action of performing that practice, more complex practices did not pose any additional challenges as compared to simpler practices. Respondents were clearly and repeatedly told what literacy practice each flashcard was meant to represent, so that these would serve as mnemonic support. During the pilot test, it was clear that the flashcards fully performed this role.[3] Respondents were asked to apportion 50 beans among the five flashcards, according to the value that these practices had in their life. In this way the valuation of the five domains took place simultaneously, with the respondents having the whole spectrum of domains in front of them when attributing scores. Trade offs were made explicit since the number of beans was fixed and beans allocated to one domain could not be allocated to another.

The literacy practices to be addressed in the valuation exercise were identified through a process of interviews and focus-group discussions
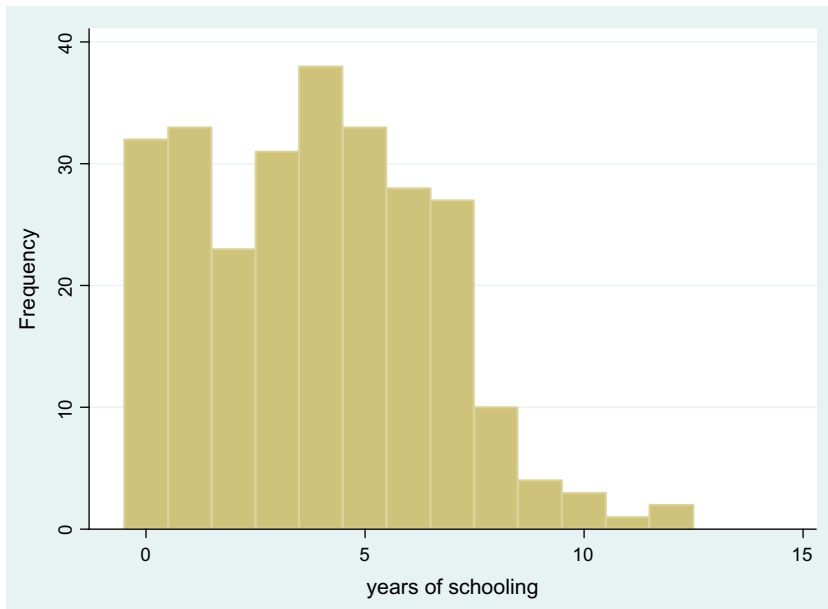
Figure 2. Distribution of years of schooling.

carried out prior to the main survey. These targeted members of the occupational categories mentioned above. The six focus-group discussions involved 6–8 participants, which, for each focus group, were homogeneous in terms of occupational category. Interviewees and participants were first invited to mention literacy practices in which they engaged in their everyday life and that they valued. Around a dozen literacy practices were mentioned. From these, we selected the five that emerged as the most important, in that they were the most frequently mentioned during the focus-group discussions and received the highest scores during individual and collective budget allocation exercises. The five most valued literacy practices were: (1) signing one's name (SIGN), (2) performing simple calculations (CALC), (3) dealing with official documents (DOC), (4) using mobile phones (MOB) and (5) helping children with homework (HELP) – for the relation between the ability to perform these literacy practices and formal education see Esposito, Kebede, and Maddox (2011). The selected categories of literacy practices are deliberately left abstract and under-specified.[4] We did not distinguish, for example, between the different contexts in which people might sign their name, or the kind of official documents they might have to deal with. This is in keeping with the theoretical understanding of literacy practices as more abstract than specific events and texts, and enabled aggregation within the categories of practice. The risk that the identification of the most valued literacy practices was restricted to those that people felt happy to discuss must be acknowledged. For example, Ahearn's (2001) work in a Nepal school

identified private love letters as a highly valued practice. Maddox's (2005) work in Bangladesh describes private forms of literacy practice that are not freely discussed or displayed in public. Ethnographic research to obtain a deeper understanding of people's most valued literacy practices (and an extended list of practices) would certainly have been useful – and this must be taken into account as one of the limitations of the data. We should note, however, that the key principle is that the above literacy practices have been identified as distinctive and important literacy domains by the participants rather than by the researchers.

4. Empirical analysis

In this section, we provide a description of the data gathered through the valuation exercise and an analysis of the possible impacts of formal education, occupation, gender and housing (as a proxy for wealth). Table 1 presents the mean, median and standard deviations of the valuations of the five literacy practices as well as statistical tests aimed at determining 'how strong' differences in valuations across the five literacy practices are.

Both in terms of mean and median, people attach the highest values to HELP and CALC. In the middle are SIGN and DOC and the least valued is MOB. Pair-wise *t*-tests indicate that in all cases except one, these differences are statistically significant – that is, the surveyed individuals value the five literacy practices significantly differently. That CALC is valued highly probably reflects that most of the surveyed individuals are involved in self-employed market activities. The high valuation given to HELP tallies with the fact that all except 16 individuals (only 6% of the sample) have children, some as many as 12.

Table 1.   Mean, median and standard deviations of valuations of literacy practices and statistical tests of differences.

	HELP	SIGN	MOB	DOC	CALC
Mean	11.97	9.78	6.31	9.25	12.68
Median	12.00	10.00	6.00	9.00	12.00
SD	4.30	4.18	4.91	5.04	4.76
T-tests for pair-wise differences					
SIGN	6.13[**]				
MOB	14.58[**]	9.06[**]			
DOC	6.89[**]	1.36	−7.03[**]		
CALC	−1.87[*]	−7.69[**]	−15.66[**]	−8.31[**]	

Notes: HELP = help children with homework, SIGN = sign one's name, MOB = use mobile phones, DOC = deal with official documents, CALC = perform simple calculations.
[*] $p < 0.1$; [**] $p < 0.01$.

Table 2.   Tests for differences and correlation coefficients of valuations of literacy practices to years of schooling (0–12 years of schooling).

	Pearson's chi-square	*P*-value	Correlation	*P*-value
HELP	381.42	0.000	0.11	0.071
SIGN	306.45	0.218	−0.03	0.570
MOB	241.33	0.838	0.01	0.906
DOC	247.61	0.959	−0.02	0.786
CALC	343.28	0.221	−0.06	0.335

Notes: HELP = help children with homework, SIGN = sign one's name, MOB = use mobile phones, DOC = deal with official documents, CALC = perform simple calculations.

The way in which people value their literacy practices might be systematically different across years of formal education. Table 2 presents Pearson's chi-square and correlation coefficients between the valuations of each literacy practice and years of schooling (which varies between 0 and 12 years). As can be seen from the table, the chi-square statistics show statistical significance only for HELP (significant at 10% level and positive), indicating that more educated people tend to value this literacy practice more than less educated people. Hence, bivariate analysis suggests that, with the exception of HELP, people's valuation of literacy practices does not seem to be significantly correlated to years of schooling.

The question of whether people's valuations systematically vary with occupations is tackled in Table 3 where mean, median and standard deviations of valuations are disaggregated by occupations.

It is possible to see that while the importance given to HELP and CALC is still relatively high for most occupations, and MOB is still the least valued for all of them, there are some interesting differences by occupation, which the Pearson's chi-square statistics indicate as statistically significant. This suggests that variations in the day-to-day activities of people in different occupations are likely to generate variations in the valuation of literacy practices. For example, the values attached by market and street sellers to CALC are 57% higher than the one by farmers, who, in turn, highly value DOC.

Residential locations and types of houses in which respondents live can be used as proxies for income/wealth of respondents. Residential locations are categorised into city centre, suburban and rural areas, and three types of houses were identified: houses with straw walls and a thatched roof, houses with straw walls but a steel roof and houses made of concrete. The Pearson's chi-squares in the last two rows of Table 3 show that there are no significant statistical differences. These results suggest that within our sample, valuations of literacy practices do not seem to vary by economic status.

The results so far presented should be interpreted with caution as they do not control for potential confounding effects. In order to control for that,

a multivariate framework is employed. Note that since the total number of beans is fixed, more beans for one literacy practice automatically means fewer for the others. This implies that the dependent variable of one regression (i.e., the value attached to a certain literacy practice, represented by the number of beans) is related to the dependent variable of another regression. Because of this linear dependence (the values on all the literacy practices add up linearly to 50), we use Zellner's 'seemingly unrelated regressions' (see Zellner 1962). For a baseline we used CALC – in this way the model best fits the data. In this multivariate framework, the value attached to each literacy practice (represented by the number of beans) is regressed on different socio-demographic characteristics (see Table 4).

The explanatory variables in this model include age, gender, residence, type of house, number of children, years of schooling and occupation.

Table 3.   Mean, median and standard deviations valuations (number of beans) of literacy practices by occupation.

		HELP	SIGN	MOB	DOC	CALC
Market seller	Mean	12.70	8.82	6.61	7.94	13.93
(*n* = 84)	Med	12.00	9.00	6.00	8.00	4.00
	SD	3.60	3.21	4.28	4.01	4.55
Street seller	Mean	11.54	10.40	6.01	8.10	13.94
(*n* = 63)	Med	12.00	10.00	5.00	8.00	14.00
	SD	4.69	5.20	4.90	4.70	4.71
Fisherman	Mean	11.77	10.58	7.39	8.00	12.26
(*n* = 30)	Med	11.00	10.00	6.00	8.00	12.00
	SD	5.25	5.37	6.62	4.94	4.02
Cobbler	Mean	11.91	10.00	7.00	11.36	9.73
(*n* = 10)	Med	10.00	10.00	6.00	9.00	7.00
	SD	6.96	3.79	6.00	6.98	4.76
Sailor	Mean	10.40	13.60	2.00	11.00	13.00
(*n* = 6)	Med	8.00	14.00	0.00	10.00	10.00
	SD	6.19	4.39	3.08	5.00	5.05
Cart puller	Mean	11.15	9.15	5.00	10.38	14.31
(*n* = 25)	Med	11.00	9.00	5.00	10.00	13.50
	SD	3.82	2.96	4.73	5.37	5.31
Farmer	Mean	11.96	10.06	6.46	12.43	9.09
(*n* = 51)	Med	12.00	10.00	6.00	12.00	9.00
	SD	3.63	3.65	4.64	5.01	3.02
Statistical tests for difference of valuation (Pearson's chi-square)						
Occupation		207.07**	202.41**	141.44	182.62*	211.72**
Residential area[1]		23.70	24.04	34.75	51.63	51.15
House type[2]		41.58	35.45	24.42	51.66	47.97

Notes: [1]Residential area of the sampled individuals is divided into city centre, suburban area and rural area. [2]House types are divided into straw, straw with steel roof, and concrete; HELP = help children with homework, SIGN = sign one's name, MOB = use mobile phones, DOC = deal with official documents, CALC = perform simple calculations.
$^*p < 0.05$; $^{**}p < 0.01$.

Table 4. Zellner's seemingly unrelated regressions of relative importance of different literacy practices.

Coefficient	1 HELP	2 SIGN	3 MOB	4 DOC	5 Joint tests (chi^2)
Male	−0.579	−1.238[*]	2.004[***]	0.0659	8.74[*]
	(0.681)	(0.739)	(0.749)	(0.807)	
Age	−0.733[***]	−0.203	0.463	0.501	16.01[**]
	(0.266)	(0.289)	(0.293)	(0.315)	
Age squared	0.00805[**]	0.00287	−0.00547	−0.00521	
	(0.00339)	(0.00368)	(0.00372)	(0.00401)	
Type of house (straw as reference)					
Straw with	−0.162	0.0605	−0.725	0.582	1.70
steel roof	(0.608)	(0.660)	(0.669)	(0.720)	
Concrete	2.454[*]	0.817	−2.528	0.424	4.87
	(1.419)	(1.540)	(1.560)	(1.681)	
Area of residence (city centre as reference)					
Suburban	4.430	−0.753	−2.253	0.853	1.52
	(3.907)	(4.241)	(4.297)	(4.628)	
Rural	1.988	−0.0669	0.789	−0.810	0.48
	(3.941)	(4.277)	(4.335)	(4.668)	
Occupation (market seller as reference)					
Street seller	−1.565[**]	1.515[*]	0.586	0.298	7.91[*]
	(0.753)	(0.817)	(0.828)	(0.892)	
Fisherman	−1.871	4.134[***]	1.505	−1.753	14.72[***]
	(1.210)	(1.313)	(1.331)	(1.433)	
Cobbler	0.505	1.151	−2.288	5.906[***]	17.78[***]
	(1.508)	(1.637)	(1.659)	(1.786)	
Sailor	−2.522	7.422[***]	−5.573[**]	1.323	12.06[**]
	(2.290)	(2.485)	(2.519)	(2.713)	
Cart puller	−0.483	0.402	−1.113	1.902	1.93
	(1.284)	(1.393)	(1.412)	(1.521)	
Farmer	−0.628	1.560	−1.410	3.287	4.52
	(1.739)	(1.887)	(1.913)	(2.060)	
Joint test for all occupations					52.58[***]
Number of	0.530[***]	−0.279	−0.440[**]	−0.110	19.77[***]
children	(0.161)	(0.175)	(0.177)	(0.191)	
Value literacy	0.908	0.267	0.710	−1.144	4.72
for its own	(0.711)	(0.772)	(0.782)	(0.843)	
sake					
Years of	0.229	0.105	0.401[*]	−0.563[**]	9.07[*]
schooling	(0.202)	(0.220)	(0.222)	(0.240)	
Desired years	−0.157	−0.213	−0.365[**]	0.292[*]	19.83[***]
of schooling	(0.138)	(0.150)	(0.152)	(0.163)	
Capacity to do the literacy practices					
HELP	1.425	−1.662	−0.477	1.407	5.56
	(0.967)	(1.049)	(1.063)	(1.145)	

(*Continued*)

Table 4.   (*Continued*).

Coefficient	1 HELP	2 SIGN	3 MOB	4 DOC	5 Joint tests (chi^2)
SIGN	0.0491	–2.164[*]	0.687	1.583	4.52
	(1.065)	(1.156)	(1.172)	(1.262)	
MOB	–1.375	–0.875	0.889	2.262	4.24
	(1.227)	(1.332)	(1.350)	(1.454)	
DOC	–1.082	0.0898	1.082	2.172[**]	14.55[***]
	(0.778)	(0.844)	(0.855)	(0.921)	
CALC	0.555	–0.492	3.380[*]	–5.270[***]	8.29[*]
	(1.673)	(1.816)	(1.840)	(1.982)	
Frequency of use of literacy practices					
HELP	0.720	2.195[***]	–1.650[**]	–1.514[*]	12.58[**]
	(0.751)	(0.815)	(0.826)	(0.890)	
SIGN	–2.521	3.653[*]	–1.509	0.164	5.51
	(1.721)	(1.868)	(1.893)	(2.039)	
MOB	0.493	2.781[***]	–1.084	–2.201[**]	17.61[***]
	(0.725)	(0.787)	(0.798)	(0.859)	
DOC	0.489	–1.524[**]	0.666	1.526[**]	10.96[**]
	(0.657)	(0.713)	(0.723)	(0.779)	
CALC	–0.781	2.005[**]	–0.899	–1.768[*]	10.07[**]
	(0.874)	(0.948)	(0.961)	(1.035)	
Constant	23.48[***]	13.77[*]	–0.469	1.978	
	(6.853)	(7.438)	(7.538)	(8.118)	
Observations	191	191	191	191	
Chi^2	51.94[***]	50.35[***]	46.64[**]	69.37[***]	
R-squared	0.2138	0.2086	0.1963	0.2664	
Breusch-Pagan test of independence: chi^2 (6) = 81.152, $p = 0.0000$					

Notes: The relative importance of each literacy practice is represented by the number of beans individuals assigned to each practice from a total of 50 beans; types of house are: straw, straw with metal roof, and concrete (straw is the omitted category); areas of residence are: city centre, sub-urban and rural (city centre omitted); the omitted regression is on the value attached to CALC; standard errors in parentheses; HELP = help children with homework, SIGN = sign one's name, MOB = use mobile phones, DOC = deal with official documents, CALC = perform simple calculations.
[*]$p < 0.1$; [**]$p < 0.05$; [***]$p < 0.01$.

Additional variables closely related to literacy, such as the capacity of people to perform the literacy practices and the frequency with which they use them, are also added. Further, desired years of schooling (up to what level of schooling individuals would like to study) and valuation of literacy for its own sake are also included. The first is included to examine if the desire to attain higher levels of education systematically affects the value people attach to literacy practices. Individuals who value literacy for its own sake are those who gave more abstract 'intrinsic' reasons for why they value

literacy as opposed to valuing literacy for more instrumental reasons (e.g. 'getting a job' or 'making good money').[5]

General statistics on the model are reassuring; the Breusch-Pagan test of independence and the four equations estimated are all highly significant ($p < 0.00$). The last column in Table 4 presents joint significance tests (whether the relevant coefficients are jointly zero in all the regressions). Gender and age are rather weakly significant. While males compared to females attach a significantly higher value to MOB, they give lesser value for SIGN.[6] It was found that HELP has a significant and negative correlation with age: the older the respondent the lower the importance attributed to HELP. This is highly intuitive – older people tend to have older children whose need for help with homework is likely less. Reinforcing the results from the previous section, type of house and area of residence are not significant correlates even in this multivariate framework. A result from previous bivariate analysis, which does not find confirmation in our multivariate analysis, is the role of formal schooling in valuing HELP, which emerges as not significant (it should be considered that in bivariate analysis, significance was anyway pretty weak, at only 10%). The overall message for what concerns the role of years of formal schooling is that this variable does not seem to influence the value attached to different literacy practices.

The coefficient on the number of children in the equation for HELP is positive and highly significant, confirming that individuals with more children value HELP more. While street sellers attach less value to HELP, fishermen and sailors and to some extent street sellers value SIGN significantly more than market sellers (used as reference). While sailors value MOB less, cobblers give more importance to DOC. The higher the desired years of schooling the more respondents are likely to value complex tasks such as DOC. The opposite holds for MOB, while the valuation of HELP and SIGN does not show significant correlation.

Do literacy capacities influence values? Is the importance attributed to different literacy practices influenced by the capacity to perform them? Generally, we find that the capacity to perform a specific literacy practice is not significant. However, two results are worth mentioning. *A priori* it is difficult to predict how the capacity to perform a literacy practice will affect its valuation. If people value more what they have already achieved rather than what they have not, the coefficients will be positive, while the opposite will happen if people have diminishing appreciation for what they already have. Both stories emerge from our data: the value attached to SIGN is negatively correlated to the ability to sign, while the ability to deal with documents increases the value attached to DOC. As for frequency of use, in four out of the five cases, the joint tests are significant. However, only in the case of SIGN and DOC is there a clear pattern, with the value attached to the practice increasing with the frequency of its use.

5. Conclusion

The concept of literacy practices is of central importance to New Literacy Studies and has informed extensive ethnographic description of literacy within and beyond educational settings. This paper extends that literature by showing the viability of taking a quantitative route to the investigation of an issue that so far has received little attention, namely that of the importance people attached to different literacy practices. In particular, we illustrate a practical and statistically rigorous way to quantitatively investigate value using primary data from a deprived area in Mozambique. Values have been elicited through the implementation of the Budget Allocation Technique supported by flashcards – visual representations of literacy practices. As we have argued, this methodology has a series of advantages compared to other methodologies, such as the more widely used Likert scales, and has proved to be a useful way of quantifying value with respondents at the lowest end of the educational spectrum.

Our analysis showed interesting correlations between value judgements and individual demographic characteristics such as occupation, age or gender. The approach has enabled us to identify patterns of shared value attributed to literacy practices within and across occupational groups, even where differences in literacy abilities and schooling are considered. This supports the socio-cultural thesis that the values attributed to different literacy practices are neither idiosyncratic nor solely determined by educational abilities, but are associated with the social uses and status of literacy practices.

If, as qualitative researchers highlight, literacy is a heterogeneous and changing phenomenon, this suggests scope for quantified analysis of literacy preferences to inform educational policy, including literacy curriculum and assessment, such as decisions over which literacy practices and associated texts are included in cross-cultural literacy assessment. Such data could, for example, be used to inform democratic projects of representation and advocacy by recognising the literacy preferences of indigenous groups or by informing curriculum development in a rapidly changing literacy environment.

A few words of caution are necessary. Firstly, it should be kept in mind that our quantitative analysis is based on a relatively small sample. The application of the statistical and econometric techniques used in this paper on a larger dataset would have possibly allowed the identification of neater and more robust trends. Secondly, it is important to stress that statistical methods are not intended to replace, but rather to complement, qualitative research into literacy practices. They are in fact open to critique, particularly from the socio-cultural perspective of the New Literacy Studies. They may, for example, fail to capture aspects of diversity that are critical to our understanding of literacy practices, or the extent to which values are dependent on 'situated', domain-specific and temporal characteristics.

Furthermore, the transition from qualitative perspectives on literacy as social practice in the New Literacy Studies to their quantitative enumeration is not necessarily seamless. The former provides a much deeper analysis of the socio-cultural character of practices and is better placed to explain why and in what ways literacy practices are valued. As a process of representation, it is necessary to remember that the politics and power-relations in the identification and 'naming' categories of literacy practice (Street 2011) remain telling, as is the researcher's role in identifying policy implications.

We successfully combined the anthropological theory of literacy practices with quantitative techniques to investigate how people attach value to different literacy practices. But the topic clearly merits further research to incorporate more nuanced analyses of literacy practices and to investigate in more substantive terms people's reasons for assigning value. It would have been useful, for example, to carry out post-survey qualitative research to illuminate some of the correlations we have found between value and demographic and occupational characteristics. We hope our work will encourage further mixed-methods research into literacy practices.

Notes

1. The decision to use equal or unequal weights has been the subject of academic debate. Hsieh (2004) suggests the usefulness of unequal weights, while opposite conclusions are reached by Trauer and Mackinnon (2001), Wu and Yao (2006a, 2006b), Stapleton and Garrod (2007) and Wu (2008), while mixed evidence is provided by Russell et al. (2006) and Philip et al. (2009). Decancq and Lugo (2013) provide a review of weighting methodologies.
2. Recent papers have tried to correct for this through the 'anchoring vignettes' methodology, where personal valuations are set against a standard in order to increase interpersonal comparability – see Angelini et al. (2009), Beegle, Himelein, and Ravallion (2009), Kaypten, Smith, and van Soest (2007), King et al. (2004), Kristensen and Johansson (2008) and Salomon, Tandon, and Murray (2004).
3. The pilot comprised structured interviews with eight respondents, four males and four females. The purpose of the pilot was to test both the understanding of the questions being asked and the efficacy of the flashcards as mnemonic support for the interviewee. The pilot led to improvements in the design of the questionnaire and in the phrasing of the questions and, in addition, as mentioned in the text, it confirmed that the flashcards were effective in representing a certain literacy practice for the benefit of the interviewee.
4. The concept of literacy practice is a 'higher level of abstraction' to that of literacy events, including 'folk models' and 'ideological preconceptions' (Street 1993, 12). Barton and Hamilton (2000) describe literacy practices as '*general* cultural ways of utilizing written language' that incorporate 'values, attitudes, feelings and social relationships' (7, emphasis added). Calculation (CALC) is viewed as a social practice of numeracy (see Baker 1998). The flash card and description for calculation implied numeracy including written numbers. We apply the conceptual abstraction associated with literacy and numeracy practices to support statistical investigation and aggregation. The situated detail of

literacy and numeracy practices and question of *why* people attribute value to them are beyond the scope of the study and would be an interesting avenue for further research.

5. Quoting from our respondents, some of the intrinsic and more abstract reasons for valuing literacy were 'being knowledgeable', 'being open-minded', 'having a mild temperament', 'being able to understand the importance of things', 'see things in different ways', 'develop your mind', 'have good feelings', 'being able to forgive', 'distinguish the good from the evil' and 'understand that you should help others'.

6. It is important to note that due to the specificities of certain occupations it was not possible to achieve an even gender balance across occupations. Given that occupational categories are found to influence valuation of literacy practices, one may wonder whether this gender result may be biased. In order to check for that, we ran the same regression using the subsample made of the occupational categories that are gender balanced (market sellers, street sellers and farmers, accounting for 73.43% of the total sample) and our gender results still held, which makes us confident that the gender imbalance of some of the occupational categories did not bias our findings. We thank a referee for raising this important point.

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