Who uses the Writing Centre? University of Cape Town's writing centre user profile

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Abstract

This study investigated the profile of writing centre users at the University of Cape Town (UCT). Specifically, this study describes UCT Writing Centre users in terms of personal and academic demographics. In addition, this study compared Writing Centre users and non-users in terms of self-efficacy for reading (SER) and self-efficacy for writing (SEW). Furthermore, this study investigated the possible moderating effects of (1) frequency of writing centre use on the relationship between previous writing and SER and SEW and (2) home language between writing centre use and SER and SEW. Self-reported data was collected from a surveyed sample (*N*=255) and from the Writing Centre's electronic database (*N*=857). Results indicate that Writing Centre users are mainly South African (80.39%), English first-language speakers (54.12%), and undergraduate students (66.28%) from either the Humanities (38.97%) or Commerce (35.59%) faculties who visited the Writing Centre once (62.85%) during a six month period. Compared to the UCT student population, English second-language speakers were overrepresented as Writing Centre users. Writing centre users and non-users did not differ in terms of SER or SEW. Results from hierarchical linear regressions also indicate that neither writing centre use nor home language had a moderating effect. Implications of these results for the Writing Centre are discussed.

Keywords: writing centre; user profile; demographics; university students; self-efficacy for reading; self-efficacy for writing; home language

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Introduction

Almost all South African universities provide writing centre services. Writing centres aim to assist students to improve their writing skills and performance. They attempt to bridge the gap between the institutional expectations of the students' writing and actual writing abilities of students (Atler & Adkins, 2001). This role is important as writing is a primary method of assessment at tertiary education institutions and has been identified as central to graduate employability (Archer, 2008; Yeats, Reddy, Wheeler, Senior, & Murray, 2010). Therefore, the evaluation of writing centres in South African tertiary education institutions is important, especially considering the funding they receive. Evaluating the direct effectiveness of writing centres provides particular methodological challenges to the evaluator, such as how to measure writing improvement with validity and reliability. Nonetheless, investigating other variables, such as the users' demographic profile and users' self-efficacy beliefs, is more easily achieved. These variables are significant insofar as they hint towards writing centres' impact. Specifically, the user profile indicates the writing centre's reach (which is a prerequisite for an assessment of impact), whereas improved self-efficacy beliefs in reading and writing have been significantly correlated with improved writing outcomes.

The UCT Writing Centre

The UCT Writing Centre emerged was established in 1994 in order to address concerns of poor student writing at UCT, specifically around practices of "understanding the [writing] task, the concepts involved [in the task], [and] the form the writing should take" (UCT Writing Centre, 2015).

This programme is consistent with best practice in other writing centres in South African universities (Nichols, 2011; Stellenbosch University, 2015; Twalo, 2008; University of the Western Cape, 2015). The logic of the programme is based on work in the field of pedagogy which suggests that one-to-one consultation over a sustained period of time leads to significant improvements in students' writing (UCT Writing Centre, 2015). Therefore, the writing centre offers a one-on-one consultancy service available to all students. Participation is voluntary.

Students are required to book a consultancy session through an online booking system. Concurrently, students submit an electronic draft of their writing piece via the same system. Alternatively, students may bring a hardcopy to the consultation. Post-graduate students are required to submit a hardcopy of their writing piece an hour prior to the

appointment, and no more than 15 pages are allowed at a time. Students are encouraged to prepare for the consultation by:

- bringing assignment-specific information provided by their departments, such as assignment topics and requirements, and guidelines for writing, to the consultation;
- marking particular sections of the written draft that they would like to discuss during the consultation;
- outlining the objectives and organisation of an assignment.

(UCT Writing Centre, 2015)

The writing consultants consist of trained post-graduate students from a variety of disciplines, employed on a part-time basis. The consultants receive a week of training at the start of the academic year, as well as ongoing training workshops throughout the year.

Students may book a 30 minute consultation in order to discuss the essay topic prior to beginning the task. If a draft is submitted, students may book a one hour consultation plus an additional hour reading time for documents 7 pages or longer. The average consultation last 30 to 40 minutes. The consultation sessions are designed to be learning experiences, rather than an editing service. Therefore, the content of the consultations differs depending on the needs of the individual student and the specific writing piece in question. That said, the centre explains that:

> Most of our work with students deals with structure, argumentation, and coherence. We teach students about things like what needs to go into introductions and conclusions; the internal structure of a paragraph; how to link between paragraphs; how to make graphs/illustrations integrate with the text so that they contribute to meaning; how to work with one's sources, etc. (Eaton, personal communication, April 15, 2015).

Establishing effectiveness

Despite much anecdotal evidence, demonstrating the effectiveness of writing centres has been notoriously difficult and continues to be so (Archer, 2008; Jones, 2001; McKeague & Reis, 1990). The problem of measurement runs deep partly because the definition of "writing" is contested. That is, there is evidence to suggest that writing is not an holistic,

generalisable skill (Hayes, Hatch & Silk, 2000). Nonetheless, several early evaluations of the effect of writing centre participation utilised direct measures, such as the effect of writing centre participation on students' abilities to avoid, identify and correct common writing errors (David & Bubloz, 1985; Wills, 1984). However, this is a very narrow definition of writing, considering that different studies have conceptualised writing to include one or more of the following: spelling, punctuation, sentence structure, referencing, substantiating claims, vocabulary, writing organisation, logic, voice, register, etc. (Archer, 2008; Atler & Adkins, 2001; Twalo, 2008).

Other early studies attempted to circumvent this problem by focusing on the difference a writing centre programme may have on the writing grades of students on specific tests (Naugle, 1980; Sutton & Arnold, 1974). However, any change in academic performance may be a result of any number of extraneous factors (Jani & Mellinger, 2015).

Contemporary attempts at direct measurement of writing improvement have also suffered from methodological limitations. For example, research has been conducted which compares the first and final draft of a student's essay according to criteria set by the writing centre. This has done through independent scoring via a rubric (e.g., Archer, 2008) or qualitative feedback (e.g., Twalo, 2008). Although these studies indicate an improvement in students' writing, they are unhelpful as they measure improvement within a singular essay rather than the general improvement in writing ability of the student. In contrast, the "job [of writing centre programmes] is to produce better writers, not better writing" (North, 1984, p. 438). In other words, these studies do not indicate overall improvements in the students' writing ability over varied writing tasks.

A popular form of evaluation used writing centres has been anonymous student feedback forms. This method of data collection is inherently problematic insofar as it tends to yield only positive feedback due to selection bias (Bell, 2000; Bredtmann, Crede, & Otten, 2013; Jones, 2001). UCT's writing centre has not found this form of evaluation useful for this reason, among others (Archer, 2008). Additionally, writing centres have also occasionally used administrator/tutor feedback as a form of evaluation (e.g., Archer, 2008). However, these reports were found to have low levels of reliability and to rely heavily on subjective judgements (Jones, 2001). These methods do not seem to be useful forms of evaluation.

Most writing centres are not compulsory programmes (see Sadlon, 1980 for an exception). Therefore, sign-up for the programme includes a self-selection bias. Thus, it is

often insufficient to simply compare student achievement and academic progression between participating students and controls, as some studies have done (Jones, 2001; Yeats et al., 2010). Randomised controlled trials have been difficult to conduct for the same reason, as they would have to force some students into the programme and prevent some students' participation against the students' will (Bredtmann et al., 2013).

It seems that evaluation through direct measurement of writing outcomes is riddled with methodological constraints. However, this does not mean the impact of writing centres is beyond investigation. Instead, the literature indicates alternative variables that are relevant to writing centre outcomes.

Self-efficacy

Jones (2001) argues that it is possible to infer the effect of a writing centre on students' writing abilities by investigating correlated variables, such as students' self-efficacy. According to Bandura (1997), self-efficacy refers to the belief that an individual has about their capabilities to perform a specific task. These beliefs are theorised to be domain-specific and crucial components of related task performance. That is, successful task performance (such as writing a good essay) is said to be (at least partly) contingent on the individual's self-evaluation of their capabilities in performing that task (Bruning, Dempsey, Kauffman, McKim & Zumbrunn, 2013; McCarthy, Meier & Rinderer, 1985). Specifically, self-efficacy influences cognitive, motivational and affective processes (such as the choices made, effort exerted, perseverance and response to failure) when performing a task (McCarthy et al., 1985; Pajares & Johnson, 1996; Prat-Sala & Redford, 2012). This theory suggests that high levels of self-efficacy in writing are linked to good writing performance.

There is substantial evidence to support this theory. In one of the earliest research studies on this topic, McCarthy et al. (1985) found a statistically significant correlation between the variables, reporting that self-efficacy in writing consistently explained 15% of the variance in writing performance. In a meta-analytical study, Pajares (2003) found that early research using multiple regression models reported effect sizes ranging from .32 to .42. These early findings have been corroborated by more recent studies (e.g. Bruning et al., 2013; Prat-Sala & Redford, 2012). Using multiple regression and path analyses, these later studies recorded statistically significant effect sizes ranging from .19 to .40. Importantly, writing self-efficacy makes an independent contribution to these models even when powerful covariates such as writing aptitude and previous writing performance are present (Pajares,

2003). Furthermore, Davis (1987) found that college students who used writing centre services showed greater improvements in positive attitudes towards their writing ability as well as writing performance scores.

Additionally, there seems to be cross-domain effects for reading and writing. There is a well-documented relationship between reading and writing skills (see Shanahan & Lomax, 1986). Similarly, there is a reportedly reciprocal relationship between self-efficacy beliefs regarding reading and writing and performance scores on these tasks (Shell, Murphy & Bruning, 1989). Using regression analyses, Prat-Sala & Redford (2012) found that self-efficacy in reading and writing independently contributed to the variance of writing performance. This means that self-efficacy in reading and writing are determinants of writing outcomes both separately and through an interaction effect. Accordingly, self-efficacy in both reading and writing are highly relevant to writing performance outcomes.

Importantly, previous writing experiences are strong determinants of self-efficacy. Students' beliefs about their writing abilities are formed, in part, from their experiences and feedback they have received regarding their previous writing performance (Pajares, 2003). It stands to reason, then, that students who have experiences of performing well in academic tasks, such as writing, will tend to have higher levels of self-efficacy, and vice versa. The role of writing centre participation in potentially mediating this relationship has not been a study of empirical investigation. Therefore, it is unclear if writing centre participation effects differ for students with positive and negative previous writing experiences. Similarly, it is unclear whether writing centre effects differ for English first- and second-language speakers.

User Profile

Before an assessment of impact can be conducted, it is important to determine who uses the service. This is a critical component of evaluation as participation by the target population is a prerequisite for programme effectiveness (Rossi, Lipsey & Freeman, 2004). Moreover, knowing the user profile makes it is possible to assess potential biases in programme participation. An assessment of bias in programme participation refers to examination of the differences in individuals that participate in the programme and those that do not (Rossi et al., 2004). For example, particular subgroups within the target population may demonstrate low participation rates. Previous research indicates that this is a potential concern for writing centres. Bredtmann et al. (2013) found that most programme users in Germany were highly self-critical writers and students who performed well academically.

UCT's Writing Centre does not actively target a specific population per se insofar as the service is offered to all UCT students. As such, it is expected that the profile of users will mimic the demographics of the university's student population.

Research Aim and Questions

The research questions for this study are as follows:

(1) What is the profile of writing centre users in terms of demographics, frequency of use, previous writing performance, and self-efficacy in reading and writing?
(2) How does this profile compare to the profile of students at UCT?
(3) Does writing centre participation mediate the relationship between previous writing experience and self-efficacy beliefs?
(4) Does home language moderate the effect of writing centre participation on self-efficacy beliefs?

Methods

Design

This study draws on a number of data sources to answer the above research questions, utilising primary data as well as secondary data from existing records (i.e. the writing centre's electronic records). These sources are complementary. The electronic records are useful because they provide access to data for a large sample of clients. However, the retrospective nature of these records means that the questions asked are fixed. The use of primary data is supplementary to this insofar as it allows for questions that may be missing in the electronic records.

In terms of primary data, this study employed a cross-sectional design. The design of this study was to question two sets of students: those that had used the Writing Centre between 1 January 2014 and 30 June 2015, and those that had not. That is, participants' demographics, previous writing experiences and self-efficacy scores were recorded at one time interval. This benefits and limitations of this design are discussed later.

This study is largely interested in self-reported data, and surveys often provide an appropriate method for collecting such data (Cozby, 2004). For convenience and administrative ease, an internet survey was conducted. Dillman (2007) highlights a number of concerns regarding the use of internet surveys. For instance, there are concerns of inadequate

coverage for email and web surveys. However, all students at UCT have access to computer, email and internet services through university resources. Similarly, there are concerns regarding the effect of computer illiteracy on web survey responses. This concern is not overly problematic, as all UCT undergraduate students are given computer literacy evaluation and training, if needs be. Nonetheless, the surveys administered were constructed with low-end computer users in mind as per recommended guidelines (Dillman, 2007).

There are further concerns regarding the truthfulness of how respondents may self-identify in internet surveys (Cozby, 2004). Although it is possible that respondents may have misrepresented their demographic details, there is no reason to believe that this would be greater than other forms of data collection.

In survey research, there are concerns of low response rates and self-selection bias in respondents (Cozby, 2004). In order to address this, incentives were offered to the participants. Furthermore, a follow-up reminders were sent to increase the response rate (Dillman, 2007).

Sample

Participants. The purposive sample of participants for this study was drawn via two methods. Firstly, participants were recruited using the writing centre's database. Specifically, users who had booked appointments between 1 January 2015 and 30 June 2015 were sampled. In this instance, one inclusion and one exclusion criterion were used: the participant had to have used the UCT writing centre since January 2014 and could not be a psychology student. This exclusion criterion was employed to ensure that there were no duplicate responses as psychology students were sampled separately.

Secondly, participants were recruited from the UCT Psychology Departments' Student Research Participation Programme (SRPP). Psychology students' coursework is heavily dependent on writing assessment, thus making this an appropriate population group. There were no exclusion criteria in this instance.

Sample size. There were a total of 695 survey responses. These responses were manually audited. Invalid data was removed from the records according to a data cleaning schedule (See Appendix D). After which, there was a total of 601 valid responses (N = 601). Of these, 176 were sourced from survey emailed to the Writing Centre's users. This

represents a response rate of 20.48%, which is considered good (Fryrear, 2015; Penwarden, 2014).

The remaining 425 were sourced from the SRPP programme. Of these, 79 had used the Writing Centre since January 2014 and 346 had not.

Post-hoc power analyses revealed a high statistical power for the analyses. For the linear regression models, the power scores ranged from .980 to .999 at the $\alpha = .05$ level and .938 to .994 at the $\alpha = .01$ level.

Measures

Demographic information. The demographic profile of the Writing Centre users was derived from self-reports. The profile of UCT's student population was obtained from UCT's Institutional Planning Department.

Self-efficacy in reading and writing. The only available scale of reading self-efficacy is the Self-Efficacy in Reading Scale (Prat-Sala & Redford, 2010). This test consists of 12 items, rated on a 7-point Likert scale. The reported alpha coefficients for this scale range between .88 and .90 (Prat-Sala & Redford, 2012).

This study used the Self-Efficacy in Essay Writing Scale (Prat-Sala & Redford, 2010). This test consists of 12 items, rated on a 7-point Likert scale. The reported alpha coefficients for this scale range between .90 and .92 (Prat-Sala & Redford, 2012).

These scales are specifically tailored to measuring self-efficacy beliefs related to reading and writing tasks in the higher education context and are recognised scales within the academic literature (Mok, 2012; Maguire, Reynolds & Delahunt, 2013).

Previous writing experience. Writing grades for the first semester of 2015 was self-reported.

Writing Centre use. The number of writing centre visits since 1 January 2014 was self-reported.

Procedure

The internet survey was constructed using Google Forms. The administered survey consisted of demographic questions, questions of previous writing experience and the SER

and SEW scales (Appendix A). In the case of the sample obtained from the Writing Centre's database, the inclusion and exclusion criteria were also included in question form.

A link to the survey was advertised on the SRPP Vula page on 21 July 2015 (see Appendix B). Due to a high number of responses (N = 370), a follow-up message was sent on 23 July 2015 which announced that the survey would close the following day, which it did.

The Writing Centre staff took responsibility for the advertisement of the survey so as to ensure the confidentially of the recipients' email addresses. The study was advertised to the Writing Centre database via email which was sent on 30 July 2015. A reminder email was sent on 11 August and the survey closed on 15 August 2015.

Participants who responded to the emailed link from the Writing Centre were entered into a raffle to win a R400 voucher for an electronics store situated on the university campus.

Ethics

Ethical approval for this study was granted by the Department of Psychology's Research Ethics Committee at the University of Cape Town.

Use of Public Records. This study used, in part, reports from the writing centre which do not pose any ethical consideration or require ethical clearance. These documents are public records. The writing centre agreed to their use and supplied the records.

Deception and Beneficence. Participants benefitted by receiving a point towards the research participation portion of their academic studies or stood a chance to win a R400 voucher to an electronics store. There was minimal risk of harm to the participants. This study contained no deception.

Informed Consent and Voluntary Participation. Informed consent was obtained from all participants (Appendix C). Gaining informed consent for Internet surveys may be complicated, as participants may not read the information fully (Wilson & MacLean, 2011). However, since there was minimal risk of harm involved in the study, the implications of this are not severe.

Participation in the writing centre's programme as well as the survey was completely voluntary.

Anonymity and Confidentiality. Anonymity of the participants was upheld to some degree insofar as participants were only required to volunteer their contact details if they

wished to be entered into the raffle or to receive an SRPP point. There were 199 raffle entrees. All data was be kept on password protected files and no permanent record linking identifying information with the data was kept. Furthermore, the database of writing centre users' email addresses was not available to the researcher.

Results

User Profile

Descriptive statistics, i.e. frequency tables, for writing centre users' demographic details are presented in Table 1. A selection of these statistics are discussed below in order to outline the user profile.

The majority of writing centre clients (62.85%) visited the centre once in the six month period. Most users come from either the Humanities (38.97%) or Commerce (35.59%) faculties. About two-thirds of clients (66.28%) are undergraduate students while 33.26% are postgraduate students. Just over half (54.12%) of users are English first-language speakers. The vast majority (80.39%) of users are South African citizens or permanent residents. About a fifth (20.78%) of users are studying an extended degree programme[1]. In terms of academic profile, 23.95% of writing centre users reported a grade of under 60% for essays in the first semester of 2015, whereas 42.86% of users reported a grade of 60-70% and 33.19% of users reported a grade of over 70%.

Table 1

Descriptive Statistics: Writing Centre users' demographics

Variables	*n*	Percentage
Nationality		
South African[a]	205	80.39
Other	50	19.61
Total	255	100
Home Language		
English[b]	138	54.12
Non-English	117	45.88
Total	255	100
Number of visits per client		
Once	538	62.85
Twice	179	20.91

[1] Extended Degree Programmes target students who have experienced disparities in educational and life experiences, such as previously disadvantaged students.

Three times or more	139	16.24
Total	856	100
Clients by faculty representation (by client)		
Commerce	305	35.59
Engineering & Built Environment	77	8.98
Health Sciences	34	3.97
Humanities	334	38.97
Law	14	1.63
Science	70	8.17
Not applicable	23	2.69
Total	857	100
Level of study (by client)		
Undergraduate	568	66.28
Postgraduate	285	33.26
Not applicable	4	.46
Total	857	100
Extended Degree Programme		
No	202	79.22
Yes	53	20.78
Total	255	100
Self-reported 1st semester writing grades		
less than 40%	2	.84
40-50%	8	3.36
50-60%	47	19.75
60-70%	102	42.86
70-80%	72	30.25
more than 80%	7	2.94
Total	238	100

[a]Including citizens and permanent residents. [b]Including English as one of multiple home language.

Chi-squared analyses were used to compare the demographics of writing centre users to the known population of UCT students. This analysis facilitates observations of biases in frequency between groups (i.e. writing centre users vis-à-vis the population of UCT students) in terms of the target demographic variables. Chi-square goodness-of-fit analyses were conducted on the demographic variables of year of study, faculty of study, nationality and home language. That is, the observed frequencies of writing centre users was compared to population of UCT students (N = 26322). A total of 4 chi-squared analyses were conducted.

The percentage of undergraduate (66.59%) to postgraduate (33.41%) writing centre users is similar to that of undergraduate (64.66%) to postgraduate (35.34%) within the total student population, χ^2 (1, N = 853) = 1.39, p = .239. Similarly, there was no meaningful effect size (Cramér's V = .03).

With regards to faculty of study, there was a statistically significant difference between writing centre users and the total student population, χ^2 (1, N = 834) = 203.52, p < .001. This effect size was moderate (Cramér's V = .20). It seems that Humanities (334; 40.05%) and Commerce (305; 36.57%) students are overrepresented compared to the population total (26.69% and 24.56%, respectively). The remainder of the faculties of study were underrepresented in the sample. These results are presented in Table 3.

There was no significant difference between the nationality of surveyed users and the student population, χ^2 (1, N = 255) = .04, p = .843, Cramér's V = .03.

There was a statistically significant difference between the home languages of writing centre users and the student population, χ^2 (1, N = 255) = 11.77, p < .001. The effect size was weak (Cramér's V = .15). English first language speakers were underrepresented (138; 54.12%) and English second-language speakers were overrepresented (117; 45.88%) compared to the student population (64.41% and 35.59%, respectively).

Table 2

Observed and expected frequencies: Faculty of study

Faculty	Observed *N*	Percentage	Expected Percentage	Difference
Commerce	305	36.57	24.56	12.01
Engineering and Built Environment	77	9.23	16.30	-7.07
Health Science	34	4.08	14.94	-10.86
Humanities	334	40.05	26.69	13.36
Law	14	1.68	4.89	-3.21
Science	70	8.39	9.65	-1.26
Total	834			

Self-efficacy

According to Prat-Sala & Redford (2010), both scales of self-efficacy were found to be highly reliable during test development (SEW, 12 items; α =.927 and SER, 12 items; α =.927). However, these scales were developed in the U.K. Therefore, in order to test the appropriateness of these scales for this sample, a factor analysis was conducted. Specifically, an exploratory principal component factor analysis was conducted on all 24 items (see Appendix E). An orthogonal rotation via the Varimax with Kaiser normalised rotation method was used.

The sampling adequacy of this model was good according to the KMO measure, KMO = .966, and all individual KMO values were greater than the acceptable level of .5, with the lowest value being .95. Bartlett's test of sphericity was significant, $X^2(276) = 8629.49$, $p < .001$, indicating that the data was appropriate for factor analysis.

The initial analysis produced two factors with eigenvalues greater than Kaiser's criterion of 1. Horne's parallel test confirmed this two factor model, as did the scree plot. This two-factor model explained 55.13% of the total variance. Accordingly, two factors were extracted. After extraction and rotation, factor 1 was comprised of items 1 -12. These items are all from the Self-efficacy for Writing sub-scale. Factor 2 was comprised of items 13-24. These items are all from the Self-efficacy for Reading sub-scale. Questions 20 and 21 loaded highly (>.40) on both factors. On closer inspection, these items seem to include aspects of academic reading that are also relevant to essay writing ("How well can you search effectively for relevant background reading when writing an essay?" and "When reading, how well can you make notes in your own words?"). Nonetheless, both of these questions scored higher on Factor 2 (i.e. reading) and will be retained. The rotated factor loading for this matrix is presented in Table 3.

Table 3

Rotated factor loadings

	Component			Component	
	1	2		1	2
Question 1	.774		Question 13		.666
Question 2	.735		Question 14		.686
Question 3	.691		Question 15		.654
Question 4	.701		Question 16		.716
Question 5	.627		Question 17		.716
Question 6	.592		Question 18		.721
Question 7	.735		Question 19		.704
Question 8	.632		Question 20	.429	.594
Question 9	.759		Question 21	.406	.501
Question 10	.657		Question 22		.564
Question 11	.650		Question 23		.613
Question 12	.545		Question 24		.658

This analysis indicates that the scales are appropriate for this sample and that further analysis of these data is possible.

Descriptive statistics for self-efficacy in reading and writing are presented in Table 4. There does not seem to be large differences between writing centre users and non-users in terms of self-efficacy in either domain. Self-efficacy in both writing and reading seems to increase with year of study for both writing centre users and non-users. Furthermore, it seems that self-efficacy in reading scores are slightly higher than self-efficacy in writing scores for all groups.

Importantly the standard deviations for users and non-users are similar. This indicates that the variance in scores for the user group is similar to the non-user group. As such, there is no concern that any possible increase in self-efficacy associated with writing centre use could be concealed by low scoring participants.

Table 4

Descriptive Statistics: Self-efficacy

Variables	*M* (*SD*)	*n*
Self-efficacy for writing		
Writing centre users		
First year students	4.80 (.87)	103
Other undergraduate students	4.97 (.93)	99
Post-graduate	5.15 (1.06)	51
Total	4.92 (.94)	255
Non-users		
First year students	4.76 (.81)	164
Other undergraduate students	4.92 (.85)	156
Total	4.89 (.88)	346
Self-efficacy for reading		
Writing centre users		
First year students	4.90 (.89)	103
Other undergraduate students	5.07(.89)	99
Post-graduate	5.17 (1.14)	51
Total	5.03 (.95)	255
Non-users		
First year students	4.92 (.85)	164
Other undergraduate students	5.19 (.86)	156
Total	5.04 (.87)	346

Multiple regression analyses are useful to investigate the predictiveness of specific variables on identified outcomes (Field, 2009). Furthermore, hierarchal regressions are useful in instances where extraneous variables need to be controlled for. Therefore, a hierarchical regression was used to investigate the relationship between Writing Centre use and self-efficacy beliefs.

Control variables. The academic literature indicates that previous writing performance influences self-efficacy, and, therefore, was controlled for. In order to determine whether *Studying psychology* and *year of study* should also be controlled for, a stepwise regression was also run.

A stepwise regression found that *Year of study* was predictive of SEW, $F(1, 251) = 4.89$, $p = .028$, but not for SER. *Studying psychology* was not predictive of either SEW or SER. Therefore, *Year of study* was controlled for as a precaution.

Testing the model. According to the theoretical model, previous writing performance influences self-efficacy. This analysis aimed to test if this relationship may be moderated by the use of the Writing Centre. Additionally, *Year of study* was included as a control variable (see figure 1)

Figure 1. *Theoretical model of the moderating effect of writing centre use*

Assumptions and outliers. All assumptions of a linear regression were met (see Appendix F for details). There was one outlier outside 3 standard residuals for both the SEW and SER scale. This data represents a small percentage of the total and were therefore retained in the analysis.

Building the models. Two hierarchal regression analyses were run for SEW and SER. The overall model for SEW was significant, $F(3, 233) = 11.96$, $p < .001$. This model explained 12.2% of the total variance in SEW scores. Ignoring shared variance explained, *Previous writing performance* accounted for 11.3%, while *Year of study* accounted for 2%. *Writing Centre use* was found to be a non-significant predictor of SEW, $\Delta F(1, 233) = .00$, $p = .678$. The regression coefficients for the model are presented in Table 5.

Table 5

Linear Regression: SEW

	B	*SE B*	β
Year of study	.14	.08	.11
Previous writing performance	.34	.06	.34*
Writing Centre use	.01	.04	.04

Note: R^2=.12

*$p < .001$

The overall model for SER was also significant, $F(3, 233) = 8.48$, $p < .001$. This model explained 8.7% of the total variance in SER scores. Again ignoring shared variance explained, *Previous writing performance* accounted for 8.8%, while *Year of study* accounted for 1.2%. There was not a significant moderating effect present, $\Delta F(1, 551) = .03$, $p = .868$. *Writing Centre use* was found to be a non-significant predictor of SER, $\Delta F(1, 233) = .14$, $p = .713$. The regression coefficients for the model are presented in Table 6.

Table 6

Linear Regression: SER

	B	*SE B*	β
Year of study	.11	.08	.09
Previous writing performance	.31	.07	.29*
Writing Centre use	-.01	.04	-.02

Note: R^2=.09

*$p < .001$

In order to investigate the possible moderating effects of (1) writing centre use between previous writing experiences and self-efficacy beliefs and (2) home language writing centre use and self-efficacy beliefs, this study tested the proposed models using multiple regression modelling (Field, 2009). Specifically, this study employed hierarchical linear regression modelling to investigate the change in *R* accounted for by these variables and the interaction terms.

Moderating effect of *Writing Centre use*. Although it appears that writing centre use did not predict self-efficacy overall, it may affect students differently depending on their prior writing experiences. In order to search for a possible moderating effect of *Writing Centre use* between *Previous writing performance* and self-efficacy, the regression analyses were re-run with the inclusion of an interaction term. For SEW, the overall model remained significant, $F(4, 232) = 9.22$, $p < .001$. However, the interaction term was found to be a non-significant predictor of SEW, $\Delta F(1, 232) = .99$, $p = .321$. The regression coefficients for this model are presented in Table 7. Again, for SER, the overall model was significant, $F(4, 232) = 6.35$, $p < .001$. However, the interaction term was found to be a non-significant predictor of SER,

$\Delta F(1, 232) = .05$, $p = .823$. The regression coefficients for this model are presented in Table 8.

Table 7

Linear Regression: Moderating effect of Writing Centre use on SEW

	B	*SE B*	B
Year of study	.13	.06	.09*
Previous writing performance	.44	.06	.40**
Writing Centre use	.00	.02	.00
Writing Centre use *Previous writing performance	-.02	.02	-.03

Note: R^2=.12

*p = .033. **p < .001

Table 8

Linear Regression: Moderating effect of Writing Centre use on SER

	B	*SE B*	B
Year of study	.11	.08	.09
Previous writing performance	.28	.13	.27*
Frequency of use	-.01	.04	-.02
Frequency of use*Previous writing performance	.01	.04	.03

Note: R^2=.12

*p = .035

The role of *Home Language.* A regression analysis found that *Home Language* was not predictive of SEW, $F(1, 253) = 2.67$, $p = .103$, or SER, $F(1, 253) = 2.41$, $p = .122$ even without any control variables present (see Appendix G for details).

In order to search for a possible moderating effect between *Writing Centre use* and *Home Language*, the regression analysis was re-run with the inclusion of the control variables (*Year of study and Previous writing performance*), *Writing Centre use*, *Home Language* and an interaction term. The overall model for SEW was significant, $F(5, 231) = 7.693$, $p < .001$. However, the interaction term was found to be a non-significant predictor of SEW, $\Delta F(1, 231) = .24$, $p = .626$. For SER, the overall model was also significant, $F(5, 231) = 5.45$, $p < .001$. Again, the interaction term was found to be a non-significant predictor, $\Delta F(1, 231) = .66$, $p = .416$.

Overall, this study was able to significantly predict students' self-efficacy beliefs in reading (9%) and writing (12%) to some degree. In these models, the use of the writing centre was not significantly predictive. Furthermore, it seems that self-efficacy in reading and writing was not moderated by Writing Centre usage. This suggests that students who achieved different writing grades did not react differently to writing centre use. Home language also did not have a moderating effect. Thus, students of different home languages also did not react differently to writing centre use.

Discussion

User Profile

On face value, it is possible to conclude that a good cross-section of UCT students use the Writing Centre. This indicates that there is no stigma in using the writing centre. In the past, the writing centre was implemented as a remedial centre which focused on academically weak students. Recently, however, South African writing centres have broadened their scope to include all students in order to avoid stigmatisation (Archer, 2010). Consequently, the UCT Writing Centre asserts that "all students can improve their writing" (Archer, 2008). The academic profile of students, as previously outlined, indicates that the UCT Writing Centre is not a remedial service. In fact, many highly achieving students use the writing centre. Furthermore, many of the writing centre users reported high levels of confidence in their reading and writing ability. Additionally, the vast majority of students (80%) were not studying in the extended degree programme. Consequently, it seems that the Writing Centre's strategy in this regards has worked.

In order to better understand the user profile, it is useful to compare Writing Centre users with UCT's student population. The user profile was similar to the student population in terms of year of study and self-efficacy for reading and writing.

On the other hand, there was a difference in terms of the representation of academic faculties. Students from the Humanities and Commerce faculties were overrepresented in the user profile, whereas the Health Sciences faculty was the most underrepresented. These results make sense in respect to each faculty's assessment preferences. For instance, it seems likely that Humanities and Commerce require students to write relatively more essays than the other faculties. However, the underrepresentation of Health Sciences students may also be indicative of an issue of access since the Health Sciences faculty is geographically situated on a satellite campus. The UCT Writing Centre has recently opened a branch on the Health Sciences campus in order to address this potential issue of access. Data from this branch was not included in the electronic records obtained from the Writing Centre. Therefore, further investigation could be conducted into the user profile of this branch.

A second difference between users and non-user was found in the form of home language. However, the effect size for this result was small. Compared to the university population, English second-language speakers are overrepresented in the user profile. This has implications for transformative goals. In many South African tertiary education institutions, such as UCT, students are required to study in English regardless of their home language. This is an obstacle to effective learning and contributes to the disparity in retention and throughput between Black[2] and White students (Granville et al., 1998; Nichols, 2011; UCT, 2011, 2013). The fact that English second-language speakers were overrepresented in the user profile to a weak effect suggests that the UCT Writing Centre targets this educational obstacle to a small degree.

Self-efficacy

After year of study and previous writing experience were controlled for, writing centre use did not predict self-efficacy scores for users. Furthermore, there was no interaction effect of previous writing performance or home language between Writing Centre use and self-efficacy beliefs. This finding is significant insofar as the Writing Centre aims to increase students' sense of competence and confidence in their writing ability (Eaton, personal communication, October 13, 2015). However, the results of this study do not suggest that this has been achieved. One possible explanation for this may be that students do not use the service a sufficient number of times to produce an effect.

[2] 'Black' is used in the broad definition of any person that was or is disadvantaged due to the (continued) effects of apartheid.

Bredtmann et al. (2013) suggest that writing centre interventions may not benefit students because they only attend one or two consultation sessions. Over 60% of the UCT Writing Centre's users had used the writing centre only once in the semester despite the programme being based on the underlying premise that significant improvements in students' writing occur "best as a result of one-to-one consultation… *over a sustained period of time* [emphasis added]" (Writing Centre, 2015). On the other hand, the Writing Centre (2015) also acknowledges that it has access to limited resources which does not make regular consultations for each client possible.

Importantly, this finding is limited to efficacy beliefs. Indeed, the writing centre may (and anecdotally does) have an impact on students' long-term writing skills and short-term writing outcomes.

Limitations

This study relied extensively on self-reported data. For the purposes of this study, this data is convenient. However, self-reported data introduces the possibility of a response set, such as a social desirability response set (Cozby, 2004). For example, students may have exaggerated their self-efficacy scores. However, Cozby (2004) suggests that participants' responses should be assumed to be truthful when the researcher communicates honestly with the participant and assures confidentiality.

Furthermore, this study utilised a posttest-only design with independent groups. This type of study design requires equivalence of groups (Cozby, 2004). However, this was obviously not possible in the current study. Although the groups are similar in some ways, there are also some differences which are inherent in the study. That is, there are two possible sources selection biases implicit in this study. Firstly, students self-select whether or not to use the writing centre. Their motivations for this decision is unclear. Secondly, the participants of this study self-selected whether or not to participate. It is hoped that the use of incentives mitigates against this potential source of bias, but the degree to which this has been achieved remains unclear. Furthermore, this study's reliance on self-reported data may have led to a social desirability bias. However, the steps to ensure confidentiality and anonymity should mitigate this risk. Nonetheless, this limitation means that this study cannot make strong causal claims.

Future Research

Future research should investigate the user profile of alternative services which assist with writing development in order to provide a full picture of who uses these services. For instance, the user profile of the Health Sciences branch of the UCT Writing Centre is unknown.

Additionally, future studies should investigate clients' motivations to use the Writing Centre's services. It seems that the writing centre attracts clients with an array of self-efficacy beliefs, previous writing performances and demographic variables. Therefore, it was not possible to correlate one specific variable with writing centre use.

Lastly, future research should investigate possible strategies to increase students' self-efficacy beliefs in limited consulations.

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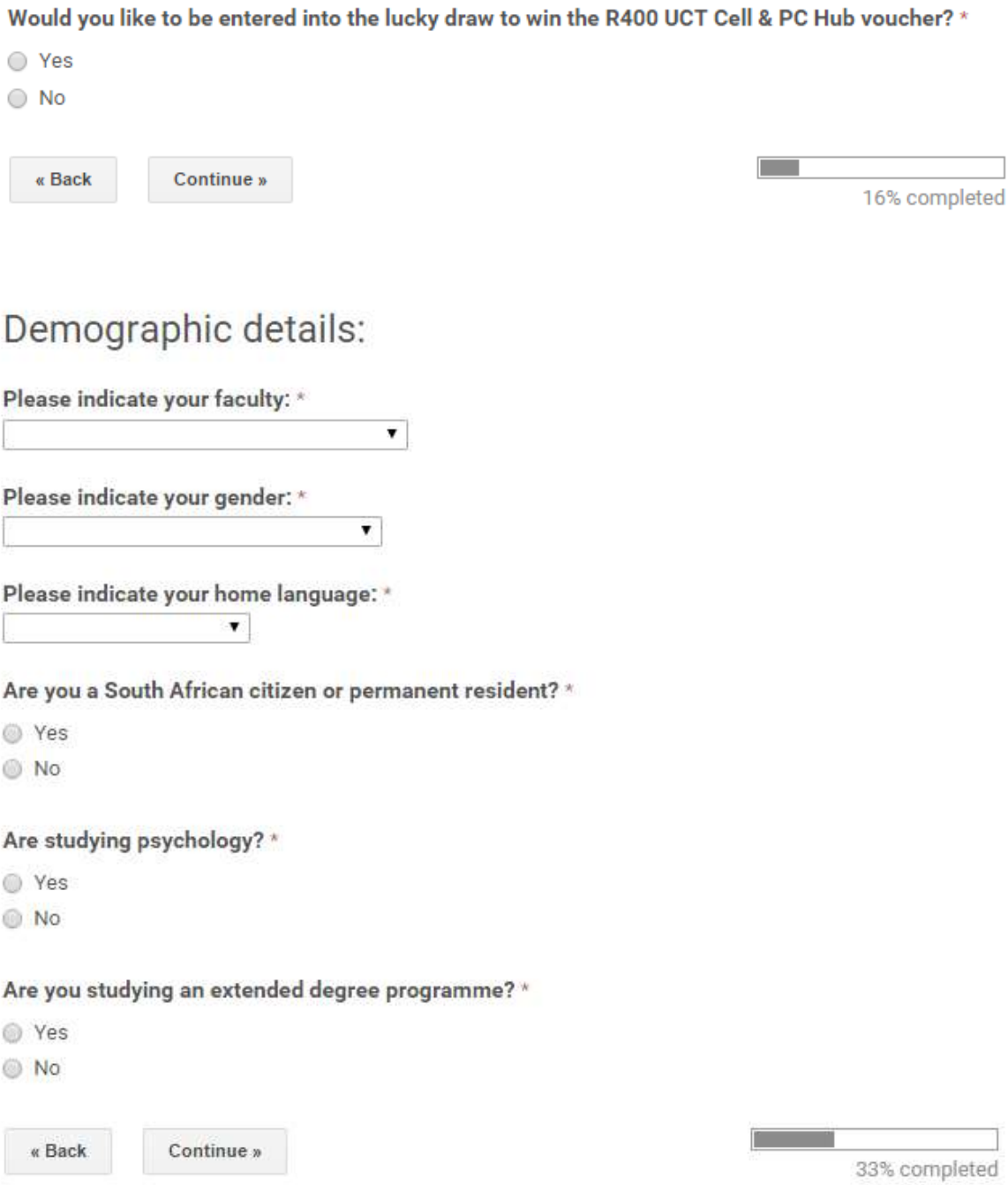
Appendix A

Survey



Would you like to be entered into the lucky draw to win the R400 UCT Cell & PC Hub voucher? *

- Yes
- No

« Back Continue »

16% completed

Demographic details:

Please indicate your faculty: *

Please indicate your gender: *

Please indicate your home language: *

Are you a South African citizen or permanent resident? *

- Yes
- No

Are studying psychology? *

- Yes
- No

Are you studying an extended degree programme? *

- Yes
- No

« Back Continue »

33% completed

Have you used the UCT writing centre since January 2014? *

- Yes
- No

« Back Continue »

41% completed

How many times have you visited the UCT writing centre since January 2014?

Please enter the course code for the first subject for which you received help from the UCT Writing Centre:

What was your average mark for that subject?

- <40%
- 40-50%
- 50-60%
- 60-70%
- 70-80%
- >80%

Did you receive help from the Writing Centre for a second subject?

« Back Continue »

50% completed

Please indicate your average marks for essays in all subjects in the first semester of 2015? *

- <40%
- 40-50%
- 50-60%
- 60-70%
- 70-80%
- >80%

Please enter the course codes for those subjects: *

« Back Continue »

83% completed

Writing Beliefs:

Each statement in this questionnaire refers to your beliefs about your ability in various activities associated with essay writing in Higher Education. Do not spend too long thinking about each answer, just answer according to your initial thoughts and beliefs.

Items are rated from 1 (not well at all) to 7 (very well).

How well can you express your arguments clearly in essays? *

	1	2	3	4	5	6	7	
not well at all	○	○	○	○	○	○	○	very well

How well can you link the paragraphs to make your essay coherent and make the text flow? *

	1	2	3	4	5	6	7	
not well at all	○	○	○	○	○	○	○	very well

If you put in a lot of effort, how well can you write an essay you are proud of? *

	1	2	3	4	5	6	7	
not well at all	○	○	○	○	○	○	○	very well

How well can you provide relevant evidence to support your argument? *

	1	2	3	4	5	6	7	
not well at all	○	○	○	○	○	○	○	very well

Before you finish your essay, how well can you make the conclusion relate to the introduction and the essay question? *

	1	2	3	4	5	6	7	
not well at all	○	○	○	○	○	○	○	very well

How well can you demonstrate substantial subject knowledge in your essay? *

	1	2	3	4	5	6	7	
not well at all	○	○	○	○	○	○	○	very well

How well can you think about what is required of you before you write an essay? *

	1	2	3	4	5	6	7	
not well at all	○	○	○	○	○	○	○	very well

How well can you put ideas together in such a way that they are clear to the reader? *

	1	2	3	4	5	6	7	
not well at all	○	○	○	○	○	○	○	very well

How well can you critically evaluate ideas and arguments in an essay using evidence, but without using personal opinions? *

	1	2	3	4	5	6	7	
not well at all	○	○	○	○	○	○	○	very well

How well can you plan and write essays because you know what the tutor expects of you? *

	1	2	3	4	5	6	7	
not well at all	○	○	○	○	○	○	○	very well

How well can you adopt a variety of different methods to enhance your essay writing, according to the question? (e.g., noting everything down straight away or writing the essay in separate blocks and then putting it together, etc.). *

	1	2	3	4	5	6	7	
not well at all	○	○	○	○	○	○	○	very well

« Back Continue »

91% completed

Reading and writing beliefs

* Required

Reading Beliefs:

Each statement in this questionnaire refers to your beliefs about your ability in various activities associated with reading in Higher Education. Do not spend too long thinking about each answer, just answer according to your initial thoughts and beliefs.

Items are rated from 1 (not well at all) to 7 (very well).

How well can you identify all the key points when reading a journal article or academic book? *

	1	2	3	4	5	6	7	
not well at all	○	○	○	○	○	○	○	very well

How well can you understand a journal article or academic book if you put a lot of effort in? *

	1	2	3	4	5	6	7	
not well at all	○	○	○	○	○	○	○	very well

Whilst reading an article, how well can you identify other relevant references which you consider may be of further interest to read? *

	1	2	3	4	5	6	7	
not well at all	○	○	○	○	○	○	○	very well

After you have read a text, how well can you answer questions on it? *

	1	2	3	4	5	6	7	
not well at all	○	○	○	○	○	○	○	very well

How well can you understand the meaning of each sentence when you read? *

	1	2	3	4	5	6	7	
not well at all	○	○	○	○	○	○	○	very well

Before you critically evaluate a statement, how well have you understood its meaning? *

	1	2	3	4	5	6	7	
not well at all	○	○	○	○	○	○	○	very well

How well can you search effectively for relevant background reading when writing an essay? *

	1	2	3	4	5	6	7	
not well at all	○	○	○	○	○	○	○	very well

When reading, how well can you make notes in your own words? *

	1	2	3	4	5	6	7	
not well at all	○	○	○	○	○	○	○	very well

If you cannot understand an academic text, how well can you understand it if you go to a lecture about it? *

	1	2	3	4	5	6	7	
not well at all	○	○	○	○	○	○	○	very well

How well can you use a variety of different methods to enable your understanding of a book chapter or journal article? (e.g., highlighting, underlining, etc.). *

	1	2	3	4	5	6	7	
not well at all	○	○	○	○	○	○	○	very well

How well can you select the most appropriate reading from a number of relevant articles and books? *

	1	2	3	4	5	6	7	
not well at all	○	○	○	○	○	○	○	very well

« Back Submit

100%: You made it.

Never submit passwords through Google Forms.

Confirmation Page

Thank you for your participation. Your response has been recorded.

The luck draw winner will be notified by 31 August 2015.

Any questions, queries and concerns about the study should be directed to:

Thomas Guattari-Stafford (Researcher) - gtttho001@myuct.ac.za
Prof. Johann Louw (Research Supervisor) - johann.louw@uct.ac.za
Rosalind Adams (Postgraduate Admin Assistant) - rosalind.adams@uct.ac.za
Department of Psychology - 021 650 3435

Appendix B

Advertisements

SRPP advertisement:

Title: Reading and writing beliefs survey

Organiser: Thomas Guattari-Stafford

Description:

This study is investigating reading and writing beliefs in university students.

We are looking for students who have **not** used the UCT writing centre in 2014 or 2015.

Please complete the online survey, which should take 20-30mins, to receive 1 SRPP point.

Email advertisement:

Dear recent writing centre user,

We are conducting a short survey to better understand students who use the writing centre services, like yourself. Please click on the link to find the survey. Your participation is completely confidential and will be of great help.

By completing the survey, you will be entered into a random draw to win a set of earphones.

Should you have any questions, please contact Thomas Guattari-Stafford at 079 855 8952 or by email at gtttho001@myuct.ac.za

Appendix C

Reading and writing beliefs

Study purpose:
This research is concerned with reading and writing attitudes among UCT students.

Study procedure:
You are asked to complete the following survey as accurately and honestly as possible. The survey may take 15 to 20 minutes to complete.

Possible risk and benefits:
There are no risks involved in this study. In return for your participation, you may choose to be entered into a lucky draw to win a R400 voucher to spend at the UCT Cell & PC Hub.

Voluntary participation:
Participation in this study is completely voluntary.

Confidentiality:
All information obtained from you will be kept confidential and any identifying information about you will not be included in the report produced from this study. All recorded information will be kept securely and only the researcher and research supervisor will have access to the information. No permanent records of identifying information will be kept.

Any questions, queries and concerns about the study should be directed to:

Thomas Guattari-Stafford (Researcher) - gtttho001@myuct.ac.za
Prof. Johann Louw (Research Supervisor) - johann.louw@uct.ac.za
Rosalind Adams (Postgraduate Admin Assistant) - rosalind.adams@uct.ac.za
Department of Psychology - 021 650 3435

* Required

Declaration by the participant: *

☐ I have read the consent form and I understand what the study is about. I voluntary consent to participate in this study.

Continue »

8% completed

Appendix D

Cleaning the data: Log and rules

1. Are you a psych student? (In order to ensure independence of groups)
    a. WC email database – "Yes" deleted [11]
    b. SRPP users – "No" deleted [31]

2. Did not write essays in 1st semester of 2015, treated as missing data
    a. If reported no essay, treated as missing data
    b. Research project included as essay
    c. Only registered in June 2015, treated as missing data

3. Level of study
    a. Taken from highest reported course code in any field
    b. Grouped 1st year, other undergraduate and postgraduate
    c. 4000 courses coded according to UCT handbook and department websites
    d. Unreported cases treated as missing data

4. Have you used the writing centre since January 2014?
    a. WC email database – "No" deleted [21]

5. Repetition
    a. Where there were 2 or more entries from the same participant, the subsequent entries were excluded. [WC email database - 4] [SRPP, users – 7, non-users - 20]

SRPP – 483 to 425

WC email database – 212 to 176

Appendix E

I conducted a factor analysis using principal components.

Descriptive Statistics:

Descriptive statistics for the scales' items are presented in Table 1. There are no missing cases in the dataset. The standard deviations for all items are non-zero.

Table 1

Principal components analysis: Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Question 1	601	1.0	7.0	4.765	1.0801
Question 2	601	1.0	7.0	4.867	1.2592
Question 3	601	2.0	7.0	5.747	1.0357
Question 4	601	1.0	7.0	5.093	1.1781
Question 5	601	1.0	7.0	4.945	1.2995
Question 6	601	1.0	7.0	5.155	1.2640
Question 7	601	2.0	7.0	4.874	1.0850
Question 8	601	1.0	7.0	4.810	1.2691
Question 9	601	2.0	7.0	4.759	1.1431
Question 10	601	1.0	7.0	4.772	1.2608
Question 11	601	1.0	7.0	4.656	1.2634
Question 12	601	1.0	7.0	4.454	1.3632
Question 13	601	1.0	7.0	4.792	1.1797
Question 14	601	1.0	7.0	5.596	1.1466
Question 15	601	1.0	7.0	4.765	1.3613
Question 16	601	1.0	7.0	4.985	1.1142
Question 17	601	1.0	7.0	5.068	1.2194
Question 18	601	1.0	7.0	4.792	1.1895
Question 19	601	1.0	7.0	4.920	1.1692

Question 20	601	1.0	7.0	4.882	1.4110
Question 21	601	1.0	7.0	4.930	1.3620
Question 22	601	1.0	7.0	5.388	1.1977
Question 23	601	1.0	7.0	5.378	1.2644
Question 24	601	1.0	7.0	4.922	1.2512
Valid N (listwise)	601				

Suitability for factor analysis

The KMO score is .966 which is considered good. This indicates that the sample size is adequate. Furthermore, the individual KMO scores are all well above the .5 minimum threshold and range between .949 and .980.

Bartlett's test of sphericity is significant $X^2(276) = 8629.49$, $p < .001$. The partial correlations, as apparent in the anti-image matrix are generally close to zero (i.e. equal to or less than .35).

The correlation matrix indicates fairly high levels of correlations between variables within each subscale. Each item has correlations moderately ($r > .3$) with all other items on each subscale. Furthermore, no correlations are above the .8 threshold, which would indicate too much shared variance. The determinant of this model is non-zero.

Accordingly, this data is suitable for factor analysis. The analysis was run for a two-factor model (i.e. reading and writing).

Identifying factors

The communalities for all items are moderate to high, ranging from .371 to .665. All these items will be kept.

According to Kaiser's criterion, there appears to be two factors with eigenvalues above 1. The scree plot (figure 1) confirms this. Horn's parallel test (1965) also suggests that there are two factors present. This two-factor model explains 55.13% of the variance in scores.

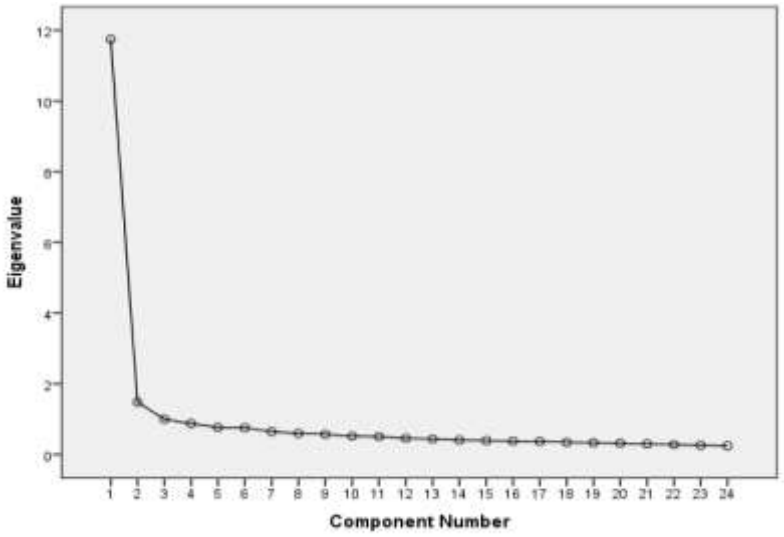


Figure 1. *Scree plot for principal component analysis*

Table 2

Comparison of Principal Component Analysis and Horn's Parallel Analysis eigenvalues

Component	PCA eigenvalue	HPA eigenvalue
1	11.749	1.436
2	1.483	1.358
3	.998	1.312
4	.875	1.268
5	.765	1.230

71 out of 266 residual scores were above the threshold of .05, which is below the 50% guideline (Field, 2000). The factor loadings before rotation are problematic because no factor loads highly (>.35) on the second component.

Rotation

An orthogonal rotation was performed using a Varimax with Kaiser normalised rotation. The rotation improved the factor loadings (below). This is also evident in the rotated factor plot (below). Questions 20 and 21 load highly on both components. On closer inspection of these questions, it appear that these questions capture beliefs about reading practices that relevant to essay-writing.

Factor 1 appears to be writing, and is constituted by items 1-12. Factor 2 appears to be reading, and is constituted by items 13-24.

Table 3

Rotated Component Matrix

	Component	
	1	2
Question 1	.774	
Question 2	.735	
Question 3	.691	
Question 4	.701	
Question 5	.627	

Question 6	.592	
Question 7	.735	
Question 8	.632	
Question 9	.759	
Question 10	.657	
Question 11	.650	
Question 12	.545	
Question 13		.666
Question 14		.686
Question 15		.654
Question 16		.716
Question 17		.716
Question 18		.721
Question 19		.704
Question 20	.429	.594
Question 21	.406	.501
Question 22		.564
Question 23		.613
Question 24		.658

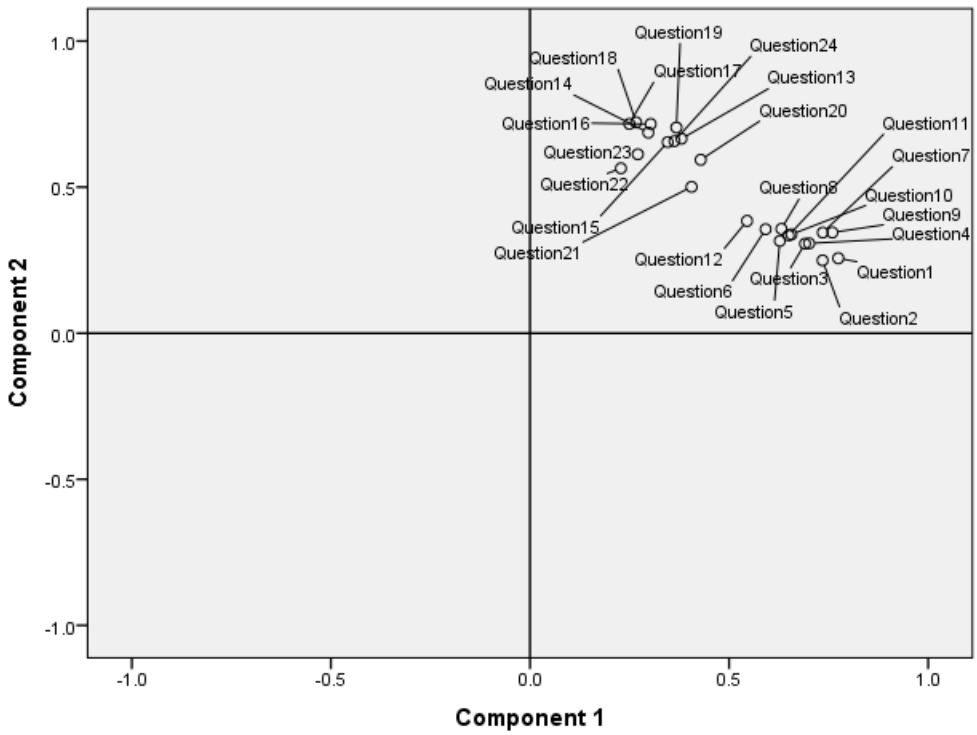


Figure 2. *Component plot in rotated space*

Conclusion

A principal component factor analysis was conducted on the 24 item scale. An orthogonal rotation via the Varimax with Kaiser normalised rotation method was used.

The sampling adequacy of this model was good according to the KMO measure, KMO = .966, and all individual KMO values were greater than the acceptable level of .5, with the lowest value being .95. Bartlett's test of sphericity was significant, $X^2(276) = 8629.49$, $p < .001$, indicating that the data was appropriate for factor analysis.

The initial analysis produced two factors with eigenvalues greater than Kaiser's criterion of 1. Horne's parallel test confirmed this two factor model, as did the scree plot. This two-factor model explained 55.13% of the total variance. Accordingly, two factors were extracted. After extraction and rotation, factor 1 was comprised of items 1 -12. These items are all from the Self-efficacy for Writing sub-scale. Factor 2 was comprised of items 13-24. These items are all from the Self-efficacy for Reading sub-scale.

Therefore, it appears that the SEW and SER scales are appropriate and generalisable to this sample.

Appendix F

Multiple Regression: Assumptions testing

It is reasonable to assume that the dependent variable is continuous in nature. Independent observations is assumed due to the research design. The independent variables all have non-zero variance. The residuals appear fairly normally distributed (see figures 1 and 2). Based on the scatterplots of the standard residuals (figures 3 and 4), homoscedasticity is a fair assumption and it is fair to assume a linear relationship.

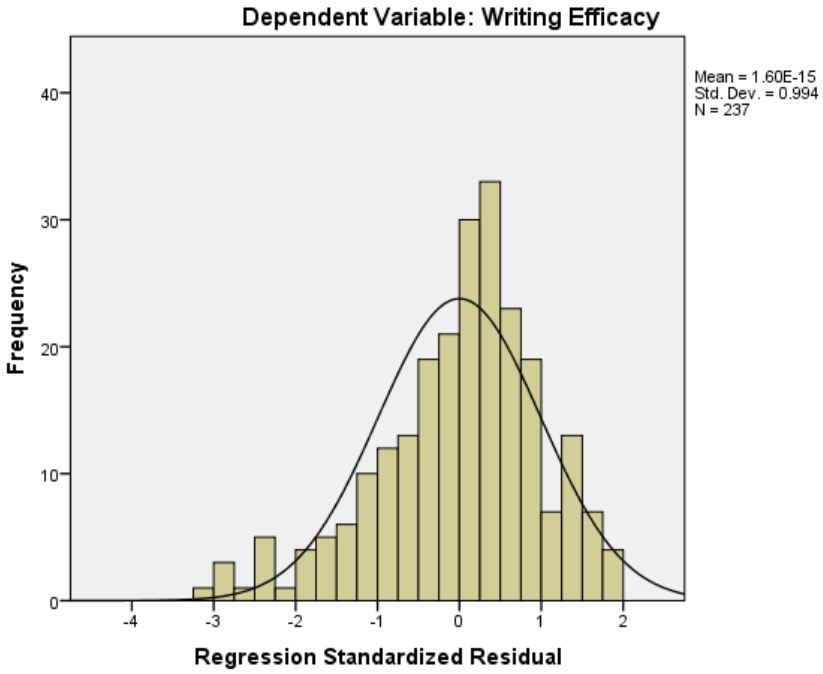


Figure 1. *Histogram of standard residuals for SEW*

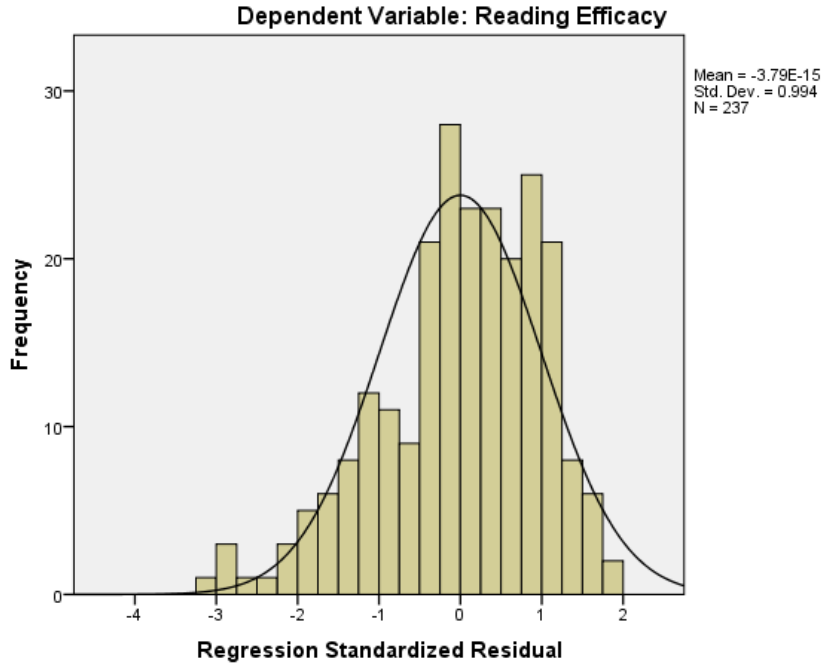


Figure 2. *Histogram of standard residuals for SER*

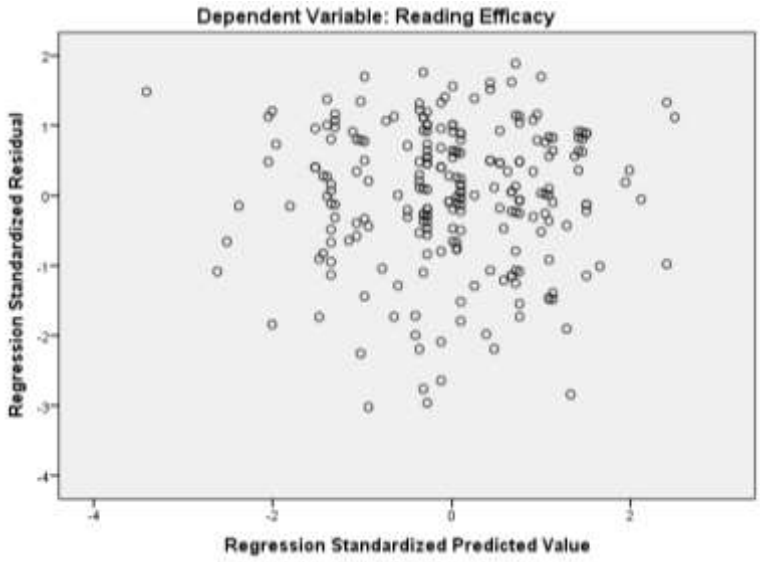


Figure 3. *Scatterplot of standard residuals for SEW*

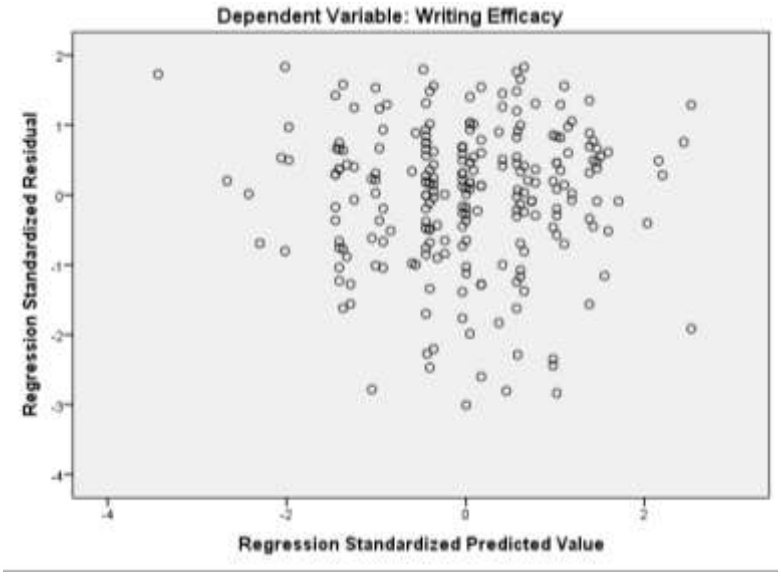


Figure 4. *Scatterplot of standard residuals for SER*

Appendix G

Multiple Regression: Home language

All assumptions are satisfied as per Appendix F.

Two linear regression models (one each for SEW and SER) were run with *home language* as the only predictor. The regression coefficients for SEW are presented in Table 1. The regression coefficients for SER are presented in Table 2.

Table 1

Linear Regression: SEW

	B	*SE B*	β
Home language	.13	.08	.07

Notes. R^2=.00 (p = .110)

Table 2

Linear Regression: SER

	B	*SE B*	β
Home language	.09	.08	.05

Notes. R^2=.00 (p = .259)

Home language was not predictive of self-efficacy in reading or writing.

Interaction Effects

There was no evidence of a moderating effect of home language on self-efficacy in writing or reading. In both instances, there was no change in R^2 due to the addition of the interaction term. The regression coefficients for each model are presented in Tables 3 and 4.

Table 3

Linear Regression: Moderating effect of home language on SEW

	B	*SE B*	β
Year of study	.14	.08	.11
Previous writing performance	.34	.06	.32*
Writing Centre use	.00	.05	.00

Home language	-.18	.12	-.09
Writing Centre use *Home language	.03	.07	.04

Note: R^2=.12

*p < .001

Table 4

Linear Regression: Moderating effect of home language on SER

	B	*SE B*	β
Year of study	.11	.08	.08
Previous writing performance	.30	.07	.29*
Writing Centre use	-.04	.05	-.06
Home language	-.13	.12	-.07
Writing Centre use *Home language	.06	.07	.07

Note: R^2=.09

*p < .001