

# Understanding How Students' Beliefs Influence Their Expectancy to Possess Effective Writing Skills in the Future

Taylor K. Ruth<sup>1</sup> and Jason L. Emmert<sup>2</sup>

## Abstract

*In order to address complex challenges of the 21<sup>st</sup> century, colleges of agriculture have to produce career ready graduates. Despite industry professionals consistently identifying writing as an essential skill for perspective employees, they have identified a lack of writing skills amongst college graduates. To help prepare the future workforce, there is a need to understand what influences college of agriculture students to believe they will be successful at writing in the future. This study used a conceptual framework that consisted of expectancy value theory (EVT), self-efficacy theory, and writing apprehension. An online survey was distributed to freshman in the College of Agricultural, Consumer, and Environmental Sciences at the University of Illinois at Urbana-Champaign and was completed by 368 respondents. Students neither agreed nor disagreed that writing offered them intrinsic value or caused writing apprehension, but they did agree it provided utility and attainment value. Additionally, students agreed they possessed self-efficacy and would be successful at writing in the future. Increased utility value, attainment value, intrinsic value, and self-efficacy led to increased expectancy to succeed at writing while increased writing apprehension decreased expectation for success. Agricultural educators and communicators should consider these findings when teaching writing skills.*

**Keywords:** writing; student beliefs; expectancy-value theory; self-efficacy; writing apprehension

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## Introduction

Colleges of agriculture need to ensure they are producing desirable graduates who can meet the ever-evolving needs of the industry (Easterly, Warner, Myers, Telg, & Lamm, 2017) in order to address the complex challenges of the 21<sup>st</sup> century (Stripling & Ricketts, 2016). While in school, future scientists in social, applied, and basic science fields have been effectively trained to engage in the research process and analytically assess complex issues (Brownell, Price, & Steinman, 2013); however, written communication skills have been consistently ranked as one of the top competencies college graduates need in preparation for the workforce (Ahrens, Meyers, Irlbeck, Burris, & Roach, 2016; Anderson, 2014; Easterly et al., 2017; Leal, 2016; National Association of Colleges and Employers [NACE], 2019). Agricultural scientists will need to learn how to effectively communicate to other scientists about their research through reports, grants, and journal articles, but they also have to learn how to communicate with lay audiences about their work to help address knowledge gaps amongst the

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public (Brownell et al., 2013). Employers have complained about a lack of writing skills across prospective candidates graduating from universities (Leef, 2013), which has indicated a need to better equip college graduates with writing skills to prepare them for the workforce.

There has been a push in recent years to incorporate writing skills into science curricula to facilitate critical thinking skills and build conceptual understanding of topics in science (Hand, Park, & Suh, 2018). Researchers have explored pedagogical approaches to increasing writing skills in colleges of agriculture and life sciences (Fischer, Meyers, & Dobelbower, 2017; Redwine, Legette, & Prather, 2017; Trojan, Meyers, & Hudson, 2016); however, students will need to be motivated to engage in these writing courses or activities for them to be successful at writing in the future (Atkinson, 1957). Additionally, research has determined students with high levels of writing apprehension do worse in writing classes compared to other students in the same course (Sanders-Reio, Alexander, Reio, & Newman, 2014). Beliefs about writing were also found to predict student's grades in a writing class, and Sanders-Reio et al. (2014) concluded these beliefs/values could be leveraged in the classroom to teach writing by addressing students' mindsets.

While research has concluded that writing skills are valued by industry employers (Ahrens et al., 2016; Anderson, 2014; Easterly et al., 2017; Leal, 2016; NACE, 2019), there is a need to understand students' value in possessing effective writing skills. Because motivations and expectancy for success have been linked to learning outcomes (Atkinson, 1957), it is important to understand students' expectations to succeed at writing in the future. Therefore, it is crucial for agricultural educators and communicators to understand students' motivations to engage in writing activities/courses. Understanding how to best leverage students' beliefs and perceptions of writing can help increase writing skills across colleges of agriculture. This study was conducted with freshman in the College of Agricultural, Consumer, and Environmental Sciences (ACES) at the University of Illinois at Urbana-Champaign (UIUC) to identify students' value in effective writing skills at the beginning of their academic career. The purpose of this study was to understand how college of agriculture students' beliefs influenced their expectancy for success at writing, which aligned with Priority Number 3 of the American Association for Agricultural Education National Research Agenda to produce a "sufficient scientific and professional workforce that addresses the challenges of the 21<sup>st</sup> century," (Stripling & Ricketts, 2016, p. 29).

### **Conceptual Framework**

The Expectancy-Value Theory (EVT) of Achievement Motivation (Atkinson, 1957), self-efficacy theory (Bandura, 1986), and writing apprehension (Lee & Krashen, 2002) provided a framework for this research. John Atkinson (1957) proposed that a person's likeliness to participate in a particular behavior was related to how much he or she valued that behavior along with their expectancy to succeed at the task. The perceived value of the behavior reflected the "perceived importance of the task," (Schunk, 2012, p. 363) and could be described through four different types of values: attainment value, intrinsic value, utility value, and cost belief value (Eccles et al., 1983). Attainment value represented the importance of the task to fulfilling social needs or conveying important information about the individual to others (Eccles et al., 1983). Intrinsic value reflected the enjoyment or internal satisfaction an individual received from engaging in a task, and utility value represented how successfully participating in a task could fulfill future goals. Finally, cost belief value aligned with what a person believed he or she might lose when engaging in a particular task, such as time or respect of peers (Wigfield & Eccles, 1992). When attainment value, intrinsic value, and utility value are high and cost belief value low, people will have a higher expectancy for success in a task (Eccles et al., 1983). When expectancy to succeed is high, likelihood to engage in specific tasks increases (Atkinson, 1957).

EVT has commonly been used in educational research. Hulleman, Kosovich, Barron, and Daniel (2017) determined when students perceived course material to be relevant to their lives and goals or had high utility value, they became more confident they would be successful in the class. Additionally, the students' scores reflected their confidence for success (Hulleman et al., 2017). Other research has found that increased levels of intrinsic value along with utility value in a subject can lead to an overall increase in interest in the subject matter material (Harackiewicz & Hulleman, 2010). Similarly, Jones, Paretti, Hein, and Knot (2013) concluded that first-year engineering college students' value in engineering was also predictive of their future career plans to enter the industry.

While the previously described studies have not used EVT to study students' expectations to succeed at writing, there are a number of studies that have explored students' motivation related to writing using other approaches. One area of study has included writing apprehension, which described the anxiety people experience when writing (Lee & Krashen, 2002). This fear of writing can lead people to select their college major, or even future careers, based on the level of required writing in the field (Masche, 2013). Writing classes can exacerbate the situation when students are negatively evaluated by teachers or peers (Karakaya & Ülper, 2011). Self-efficacy has been closely linked to writing apprehension (Autman & Kelly, 2017). Self-efficacy has been defined as one's belief he or she possesses the skills or ability to be successful in a task (Bandura, 1986) and has been found to be a strong predictor of students' motivation to learn (Zimmerman, 2000). Fischer and Meyers (2017) found that a writing intensive course helped to decrease college students' writing apprehension and increased their self-efficacy through activities like peer reviews, reflections, and editing exercises.

Wigfield and Cambria (2010) recommended future research explore how constructs from EVT were able to predict students' engagement in tasks. Because limited research existed that used EVT to explore the influences on students' expectations for success in writing, the theory, along with principles of self-efficacy and writing apprehension, were used to create a conceptual framework to guide this research (Figure 1).

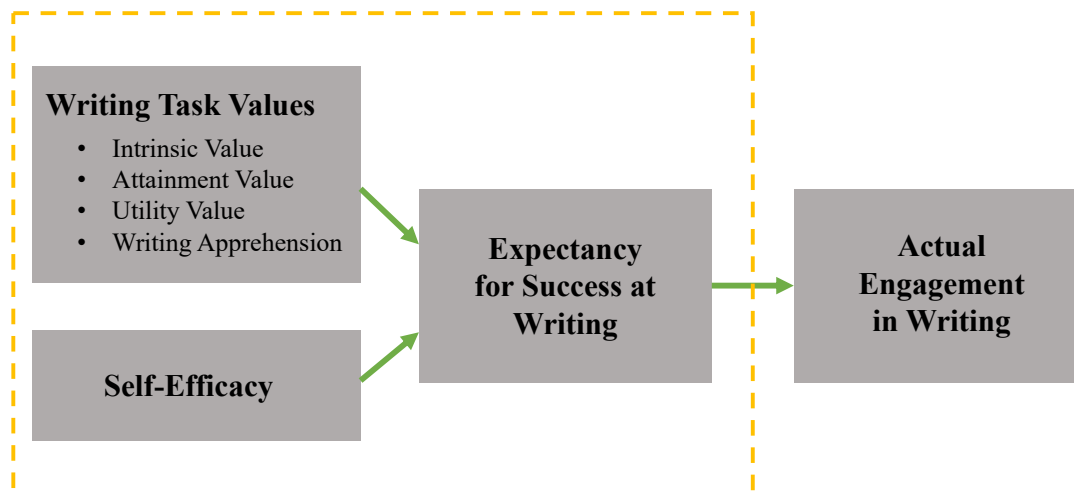


Figure 1. Conceptual model to predict engagement in writing classes/activities (Eccles et al., 1983).

The conceptual framework for the current study was adjusted to also account for self-efficacy and writing apprehension to provide a holistic approach to understanding students' motivations to possess effective writing skills. Under *task values*, cost belief value was replaced with writing apprehension because both constructs deal with a type of cost when engaging in writing (Masche, 2013). Additionally, self-efficacy was incorporated into the model because prior literature had determined this

variable important to understanding student success (Zimmerman, 2000). This framework assumed that high perceptions of intrinsic value, attainment value, utility value, and self-efficacy with low perceptions of writing apprehension would lead to high expectation expectations to be successful at writing in the future. If students believe they will be successful at writing in the future, they will be more likely to engage in tasks, classes, and jobs that require writing (Atkinson, 1957).

### Purpose and Objectives

The purpose of this study was to understand how college of agriculture students' beliefs influenced their expectancy to succeed at writing. The following objectives guided this study:

1. Describe students' intrinsic value, attainment value, and utility value related to writing;
2. Describe students' writing apprehension and self-efficacy;
3. Describe students' expectations to succeed at writing in the future; and
4. Determine how students' self-efficacy, intrinsic value, attainment value, utility value, and writing apprehension predicted expectancy for success in writing.

### Methods

A survey design was used to fulfill the purpose of the study. The population of interest was freshman students enrolled in the College of ACES at UIUC. This population was chosen to understand students' perceptions of writing upon entering the university to help guide curriculum and support for future incoming classes. A total of 512 ( $N = 512$ ) freshman students were enrolled in the College of ACES in the fall of 2018, and a convenience sample of students enrolled in ACES 101, the mandatory freshman orientation course for the college was collected in October of 2018. Although this course was mandatory for freshman, 45 students enrolled in the agricultural and biological engineering major took a separate freshman orientation course and were not included in the convenience sample of ACES 101. Four-hundred and sixty-five ( $n = 465$ ) students from the remaining eight majors in the college were enrolled in the course during the fall of 2018 (two students dropped the course prior to the research).

After receiving approval from the UIUC Institutional Review Board (IRB), the survey questionnaire was posted to the students' online learning platform for the class, Compass2g. The questionnaire was open for one week, and students received extra credit for completing the questionnaire. Compass2g allowed the researchers to see who had completed the questionnaire to assign extra credit but did not link answers to individual students. There were 368 usable responses, which yielded a response rate of 79.1%.

The demographic characteristics of the sample, students in ACES 101, and the entire College of ACES freshman class have been presented in Table 1. The majority of respondents in the sample were female (61.1%,  $n = 225$ ). Thirty-eight percent identified themselves as male (38.0%,  $n = 140$ ) and less than one percent identified as "other" or selected "prefer not to answer." Approximately half of the students grew up in a suburban area (48.9%,  $n = 180$ ) with the rest coming from rural (20.1%,  $n = 74$ ) or urban (31.0%,  $n = 114$ ) backgrounds. The majors with the largest representation of students in the study were animal sciences (24.8%,  $n = 91$ ) and agricultural and consumer economics (24.5%,  $n = 90$ ). The remaining respondents came from the 7 other majors in the college, including students with an "undeclared" major. Additionally, 26.4% ( $n = 97$ ) of respondents identified themselves as a first-generation college student.

Due to the high response rate, there is a limited concern for non-response bias (Gall, Borg, & Gall, 1996). Additionally, the demographics of the respondents reflected the known demographics of the population and the potential pool of respondents (B. Gregg, personal communications, August 28,

2019; Lindner, Murphy, & Briers, 2001). Convenience sampling is often viewed as one of the weakest forms of sampling (Ary, Jacobs, & Sorensen, 2010) due to biased demographics in the sample, which limits the generalizations of the findings to the population (Acharya, Prakash, Saxena, & Nigam, 2013). However, 90.8% of the population of interest were included in the convenience sample for this research. Omitting students enrolled in agricultural and biological engineering may skew the results, but these students represent a minority of the population, and demographics like gender and first-generation students do not appear to be influenced by not including this group, as seen in Table 1.

Table 1

*Demographic Characteristics of Respondents*

	Sample		ACES 101		2018 Freshman Population	
	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>
Gender						
Female	61.1	225	61.3	285	60.4	309
Male	38.0	140	38.5	179	39.5	202
Other/Prefer not to Answer	0.8	3	-	-	-	-
Hometown						
Suburban	48.9	180	-	-	-	-
Urban	31.0	114	-	-	-	-
Rural	20.1	74	-	-	-	-
First-Generation College Student	26.6	97	27.7	129	25.8	132
Major						
Animal Sciences	24.8	91	25.8	120	23.8	122
Agricultural and Consumer Economics	24.5	90	21.9	102	19.9	102
Food Science and Human Nutrition	10.9	40	11.2	52	10.2	52
Human Development and Family Studies	10.9	40	11.8	55	10.7	55
Natural Resources and Environmental Sciences	10.6	39	11.4	53	10.4	53
Undeclared	6.3	23	6.8	32	6.3	32
Crop Sciences	5.7	21	5.4	25	4.9	25
Agricultural Leadership, Education and Communications	4.6	17	4.5	21	4.1	21

Table 1

*Demographic Characteristics of Respondents Continued...*

Technical Systems Management <sup>a</sup>	1.6	6	1.1	5	1.0	6
Agricultural and Biological Engineering	0	0	0	0	8.8	45

*Note.* Some respondents elected not to answer all demographics questions.

<sup>a</sup> A student mistakenly selected this major in the questionnaire.

The questionnaire consisted of 17 questions about students' perceptions related to writing and science communication. The constructs on the questionnaire were adapted from previous research (Autman & Kelly, 2017; Ruth, 2018) and were reviewed by a panel of experts prior to distribution to account for face validity (Ary et al., 2010). The panel consisted of an Assistant Professor of Agricultural Communications with expertise in survey design, a Teaching Assistant Professor of Agricultural Leadership Education with expertise in graduate career-readiness, and a Professor of Animal Sciences who previously served as an Assistant Dean for the College of ACES and was familiar with the career-fields students in the College of ACES typically entered after graduation. Additionally, cognitive interviews with College of ACES students not enrolled in the freshman class were used to adjust questions for clarification when needed (Ary et al., 2010).

Intrinsic value, attainment value, utility value, writing apprehension, self-efficacy, and expectancy for success were all measured on 5-point, Likert-scales with the following labels: 1 = *strongly disagree*, 2 = *disagree*, 3 = *neither agree nor disagree*, 4 = *agree*, and 5 = *strongly agree*. Real limits were used to establish cut-off points in interpreting the scales and to help better understand the findings (Sheskin, 2004). The real limits were 1.00 – 1.49 = *strongly disagree*, 1.50 – 2.49 = *disagree*, 2.50 – 3.49 = *neither agree nor disagree*, 3.50 – 4.49 = *agree*, 4.50 – 5.00 = *strongly agree*.

The constructs for intrinsic value, attainment value, utility value, and expectancy for success were all adapted from Ruth (2018). The construct for intrinsic value consisted of six items that asked about the internal satisfaction students received from writing (e.g. "I find writing to be boring," and "I find writing to be exciting,"). Statements were recoded so high intrinsic value was a five and low intrinsic value was a one. The items were averaged to create the construct, which was found to be reliable at a Cronbach's  $\alpha$  of at least .70 (Cronbach's  $\alpha$  = 0.86; Field, 2013). Attainment value was measured with six items that asked respondents about how writing fulfilled a social need. Examples of items included, "I feel good about myself when I do well with writing," and "I value to prestige of being a top writer." Items were recoded as described for intrinsic value, and the items were averaged to create the construct (Cronbach's  $\alpha$  = 0.71). Five items were used to measure utility value. These items asked respondents about how writing has helped or could help them in their careers (e.g. "learning about writing is not useful for my career," and "learning how to write well will be useful for my career after graduation"). The average of the items was calculated after items were reverse coded so positive perceptions of utility value were a five and negative perceptions were a one. The construct was reliable (Cronbach's  $\alpha$  = 0.76). Expectations for success in writing in the future was measured with five items including, "my writing will improve in the future," and "I will be confident in my writing skills in the future," for example. The construct was created by averaging the items (Cronbach's  $\alpha$  = 0.83).

Writing apprehension was adapted from Autman and Kelly (2017) and consisted of six items (e.g. "I am apprehensive to write something professional or for evaluation," and "I fear my writing

being evaluated.”). The writing apprehension construct was created by averaging the items and was found to be reliable ( $\alpha = 0.78$ ). General self-efficacy was also measured using six items and was adapted from Autman and Kelly (2017). Examples of these items included statements like “thanks to my resourcefulness, I know how to handle unforeseen situations,” and “I can solve most problems if I invest the necessary effort.”). While these self-efficacy questions did not specifically ask about writing, Autman and Kelly (2017) recommended those questions to be asked along with the writing apprehension questions. The construct was calculated by taking an average of the items ( $\alpha = 0.81$ ).

All data were analyzed in SPSS. Respondents were omitted from analysis if they did not complete 75% of the survey. Missing responses for individual items were imputed if at least 75% of the scale had been answered. The average of the remaining item responses were imputed as the missing data for that variable.

Objectives one through three were addressed using descriptive statistics. A hierarchical multilinear regression was used to fulfill objective four. This type of analysis allows researchers to understand how individual/groups of predictors influence the dependent variable in a model (Field, 2013). In this case, the dependent variable was expectancy to succeed at writing and variables were entered in blocks starting with variables previously described in the literature as having an influence on the dependent variable (Field, 2013). Writing apprehension was included in model one and self-efficacy in model two due to past research on these variables and their relationship with student perceptions of writing (Autman & Kelly, 2017; Fischer & Meyers, 2017). The task value variables, including intrinsic value, attainment value, and utility value, were included in model three because there was limited prior research exploring these variables within the context of writing beliefs.

Assumptions for linear regression were met because the model included continuous dependent and independent variables. Skewness and kurtosis were also calculated to account for normality. Initially, self-efficacy had a kurtosis of 4.23, which fell well outside the parameters of  $\pm 2$  for normality (Field, 2013). Removal of two outliers changed the kurtosis to 1.82. Skewness and kurtosis for all other variables fell within the range of  $\pm 2$ . Multicollinearity was also assessed. The Variance Inflation Factor (VIF) fell within an acceptable range for all variables (1.18 to 1.62) as did Tolerance (.62 to .85). Therefore, assumptions for multicollinearity were met (Bowerman & O’Connell, 1990; Menard, 1995).

## Results

### Describe Students’ Intrinsic Value, Attainment Value, and Utility Value Related to Writing

Respondents reported they neither agreed nor disagreed that knowing how to write effectively offered them intrinsic value ( $M = 2.78$ ,  $SD = .78$ ). Responses to individual items can be found in Table 2. More than one-third of students found writing to be boring (37.8%) and half did not enjoy writing for assignments (50.4%). However, one-third of students did report enjoying learning about writing from experts (32.8%).

Table 2

*Respondents' Intrinsic Value of Writing (n = 368)*

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
	%	%	%	%	%
I find writing to be boring. <sup>a</sup>	8.7	29.1	28.0	29.9	4.3
I enjoy learning about writing from experts. <sup>c</sup>	4.9	19.4	42.9	29.0	3.8
I find writing to be exciting. <sup>b</sup>	10.9	27.5	36.2	20.4	4.9
I enjoy writing for fun.	16.8	34.0	24.7	19.3	5.2
Learning about writing is boring. <sup>a</sup>	10.9	38.0	31.3	18.5	1.4
I enjoy writing for assignments. <sup>b</sup>	16.9	33.5	31.3	15.3	3.0

<sup>a</sup> Indicates reverse coding; <sup>b</sup> 367 responses; <sup>c</sup> 366 responses

Respondents did agree that knowing how to write effectively offered them attainment value ( $M = 3.62$ ,  $SD = .59$ ). The largest percentage of respondents strongly agreed or agreed they felt good about themselves when they did well in writing (88.6%; Table 3). More than half of the respondents agreed or strongly agreed with the majority of the attainment value items.

Table 3

*Respondents' Attainment Value of Writing (n = 368)*

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
	%	%	%	%	%
I feel good about myself when I do well with writing.	1.4	2.7	7.3	50.0	38.6
Demonstrating good writing improves my self worth.	3.3	7.9	23.1	50.0	15.8
I believe I need to write well to feel successful. <sup>b</sup>	1.6	7.1	22.1	46.9	22.3
I value the prestige associated with being a top writer.	2.2	11.4	31.5	42.4	12.5
Proper writing skills are not necessary to show I am competent. <sup>a</sup>	4.1	17.7	25.0	40.5	12.8
I do not need to prove myself by writing well. <sup>a</sup>	3.3	24.7	32.6	34.8	4.6

<sup>a</sup> Indicates reverse coding; <sup>b</sup> 367 responses

Respondents also agreed that possessing effective writing skills offered them utility value ( $M = 3.61$ ,  $SD = .38$ ). Respondents answered favorably for each item measuring utility value, but the largest

percentage of respondents agreed or strongly agreed their academic success could be improved through writing (81.7%) and that writing would be useful for their future careers (72.0%; Table 4).

Table 4

*Respondents' Utility Value of Writing (n = 368)*

	Strongly Disagree %	Disagree %	Neither Agree nor Disagree %	Agree %	Strongly Agree %
My academic success could be improved through writing. <sup>b</sup>	0.5	2.7	15.0	56.9	24.8
Learning about writing is not useful for my career goals. <sup>a</sup>	1.4	6.8	19.8	48.6	23.4
Writing is not required in my future career. <sup>a</sup>	0.8	6.8	21.2	45.8	25.3
My writing skills helped me get into UIUC.	0.8	8.4	24.7	44.3	21.7
Learning how to write well will be useful for my career after graduation.	0.3	3.3	11.4	42.4	42.7

<sup>a</sup> Indicates reverse coding

<sup>b</sup> 367 responses

**Describe Students' Writing Apprehension and Self-Efficacy**

Respondents neither agreed nor disagreed that they experienced writing apprehension ( $M = 3.06$ ,  $SD = .71$ ). More than half of the respondents agreed or strongly agreed that writing takes too much time (56.7%) and 39.4% agreed or strongly agreed they feared their writing being evaluated (Table 5). Approximately the same proportion of respondents disagreed or strongly disagreed that they did not like having their friends read what they had written (40.3%).

Table 5

*Respondents' Writing Apprehension (n = 368)*

	Strongly Disagree %	Disagree %	Neither Agree nor Disagree %	Agree %	Strongly Agree %
Writing takes too much time. <sup>a</sup>	2.7	16.1	24.5	43.3	13.4
I am apprehensive to write something professional or for evaluation.	1.1	17.4	37.0	35.1	9.5
I fear my writing being evaluated.	4.9	29.3	26.4	29.1	10.3
I dislike having my friends read what I write.	6.3	34.0	23.9	25.8	10.1
I avoid the act of writing.	6.0	33.2	33.7	22.3	4.9
I dislike seeing my thoughts written out.	12.0	45.4	23.6	14.9	4.1

<sup>a</sup> 367 responses

The majority of respondents agreed or strongly agreed with each of the general self-efficacy statements in Table 6. Overall, the respondents agreed they possessed self-efficacy when faced with difficult tasks ( $M = 3.83$ ,  $SD = 0.55$ ).

Table 6

*Respondents' General Self-Efficacy (n = 368)*

	Strongly Disagree %	Disagree %	Neither Agree nor Disagree %	Agree %	Strongly Agree %
If I am in trouble, I can usually think of a solution.	1.4	2.7	13.9	64.7	17.4
If someone opposes me, I can find the means to and ways to get what I want.	1.4	4.3	15.5	64.2	14.4
Thanks to my resourcefulness, I know how to handle unforeseen situations.	1.6	4.3	15.5	64.1	14.4
I can solve most problems if I invest the necessary effort.	0.5	0.5	4.1	60.6	34.2
I can usually handle whatever comes my way.	1.6	4.1	20.7	58.2	15.5
I can remain calm when facing difficulties due to my coping abilities.	2.7	10.9	21.7	51.1	13.6

**Describe Students' Expectations to Succeed at Writing in the Future**

Respondents agreed they would be successful at writing effectively in the future ( $M = 3.94$ ,  $SD = .55$ ). The largest number of respondents agreed or strongly agreed their writing would improve in the future (87.5%; Table 7).

Table 7

*Respondents' Expectations for Success in Writing (n = 368)*

	Strongly Disagree %	Disagree %	Neither Agree nor Disagree %	Agree %	Strongly Agree %
My writing will improve in the future. <sup>a</sup>	0.5	1.4	10.6	62.4	25.1
I will be successful in writing courses in the future.	1.1	3.0	22.0	61.4	12.5
People will find my writing easy to understand.	0.0	2.7	20.1	60.6	16.6
I will be confident in my writing skills in the future. <sup>a</sup>	1.1	3.5	22.6	54.8	18.0

Table 7

Respondents' Expectations for Success in Writing (n = 368) Continued...

My writing skills will help me get a job after graduation. <sup>b</sup>	0.3	1.1	19.4	53.6	25.7
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<sup>a</sup>367 responses; <sup>b</sup>366 responses

**Determine how Students' Self-Efficacy, Intrinsic Value, Attainment Value, Utility Value, And Writing Apprehension Predict Expectancy for Success in Writing**

A hierarchical linear regression was used to fulfill objective 4. Model one included writing apprehension as a predictor for expectancy to succeed at writing in the future. The model was statistically significant and could account for 21% of the unique variance in expectancy to succeed at writing ( $F(1,354) = 95.80, p < .01, R^2 = .21$ ; Table 8). As writing apprehension increased by one point, expectancy to succeed at writing decreased by 0.35 points ( $b = -0.35, p < .01$ ). The measure for general self-efficacy was added in the second regression model. The addition of this variable increased the overall fit of the model by .05 ( $\Delta R^2 = .05, F(1,353) = 27.22, p < .01$ ). The second model could account for 27% of the variance in expectancy to succeed at writing ( $F(2,353) = 65.06, p < .01, R^2 = .27$ ), and writing apprehension remained a significant predictor of the dependent variable ( $b = -0.29, p < .01$ ). Additionally, general self-efficacy was a significant predictor of expectancy to succeed at writing, and as self-efficacy increase by one point, expectancy to succeed increased by .26 points ( $b = 0.26, p < .01$ ).

The task value variables of intrinsic value, attainment value, and utility value were added in the third model. This final model could account for 41% of the variance in expectation to succeed at writing in the future ( $F(5,350) = 49.51, p < .01, R^2 = .41$ ); the task value variables were able to account for 15% of the unique variance in expectancy to succeed at writing ( $\Delta R^2 = .15, F(3,350) = 28.87, p < .01$ ). Writing apprehension ( $b = -0.14, p < .01$ ) and self-efficacy ( $b = 0.22, p < .01$ ) remained significant predictors in the model. The task value variables were also predictors of the dependent variable. As intrinsic value or attainment value increased by one point, expectancy for success increased by .13 ( $b = .13, p < .01$ ) or .14 ( $b = .14, p < .01$ ) respectively. Additionally, as utility value increased one point, expectancy for success increased .29 points ( $b = .29, p < .01$ ).

Table 8

Influences on Expectancy to Succeed in Effective Writing

Variable	Model 1			Model 2			Model 3		
	b	t	p	b	t	p	b	t	p
Constant	5.01	45.01	.00*	3.83	15.31	.00*	1.57	4.68	.00*
Writing Apprehension	-0.35	-9.79	.00*	-0.29	-7.94	.00*	-0.14	-3.65	.00*
General Self-Efficacy				0.26	5.22	.00*	0.22	4.92	.00*
Utility Value							0.29	3.71	.00*
Attainment Value							0.14	3.10	.00*
Intrinsic Value							0.13	4.12	.00*
R <sup>2</sup>	.21			.27			.41		
F	95.81		.00*	65.06		.00*	49.51		.00*

Table 8

*Influences on Expectancy to Succeed in Effective Writing Continued...*

$\Delta R^2$	.06		.15	
$\Delta F$	27.22	.00*	28.87	.00*

\* $p < .01$ 

### Conclusions and Implications

This research sought to understand how college of agriculture students' beliefs influenced their expectations to succeed at writing. The findings from this study supported the conceptual framework (Figure 1) based on EVT (Atkinson, 1957), self-efficacy (Bandura, 1986), and writing apprehension (Lee & Krashen, 2002). This framework could be useful for educators trying to leverage students' beliefs in the classroom to teach writing (Sanders-Reio et al., 2014). Respondents reportedly agreed that possessing effective writing skills offered both attainment value and utility value, but neither agreed nor disagreed that writing offered them intrinsic value. Respondents also neither agreed nor disagreed they experienced writing apprehension and agreed they possessed self-efficacy. Additionally, respondents agreed they would be successful at writing in the future. Because the sample and population for this study were freshman at UIUC, they may not have experienced the high expectations associated with collegiate-level writing courses, which could lead to lower levels of writing apprehension and higher expectations to succeed. Additionally, these students were admitted as freshman to UIUC, so it can be assumed these are high-achieving students, which would also explain these findings.

The regression models in objective four demonstrated intrinsic value, utility value, attainment value, and self-efficacy were positive predictors for expectancy to succeed, while writing apprehension was a negative predictor of the dependent variable. Interestingly, the task value variables, utility value, intrinsic value, and attainment value, could account for the largest amount of unique variance in expectancy to succeed at writing. This finding illustrates the need to consider these values when working with students in writing-intensive courses.

Utility value was the strongest predictor of expectancy to succeed at writing, which supported research that increased utility value can lead to increased confidence and interest in a subject area (Harackiewicz & Hulleman, 2010; Hulleman et al., 2017). Literature had also concluded increased intrinsic value would lead to increased interest in course material (Harackiewicz & Hulleman, 2010). While intrinsic value was a significant predictor of expectancy for success, it had the smallest influence on the dependent variable in the final model. General self-efficacy was the second-strongest predictor for expectancy to succeed at writing, which aligned with Zimmerman's (2000) conclusion that self-efficacy was a strong predictor of students' motivation to learn. Also in line with past research (Lee & Krashen, 2002; Masche, 2013) was the finding that increased writing apprehension led to decreased expectancy for success. This study also found that increased attainment value could lead to increased expectancy for success in writing, which had not been identified in prior research.

### Recommendations

The conclusions from this study offer meaningful implications for practitioners and researchers in agricultural education and communication. Agricultural education departments will need to motivate students to actively engage and participate in writing courses/activities to help equip them with the communication skills needed for their future jobs (Ahrens et al., 2016; Anderson, 2014; Easterly et al.,

2017; Leal, 2016; NACE, 2019; Stripling & Ricketts, 2016). Using the conceptual model from this study can help educators when making both recruitment and course development decisions for their writing courses. Helping students find intrinsic, attainment, and utility value in writing, teaching students self-efficacy skills, and actively working to lessen students' writing apprehension can help them to feel more confident they will succeed at writing in the future. According to EVT, this expectation to succeed would translate to actual engagement in effective writing (Atkinson, 1957).

To help increase students' perceptions of utility value, educators should emphasize how the writing assignment translates to students' career goals or how the skills they are learning will help them with other classes in the future. Making writing relevant to students' lives can increase their confidence in writing (Hulleman et al., 2017). To help increase attainment value, instructors and teaching assistants should not only provide critiques of writing but also praise for a job well done. Helping to build students' confidence by bringing attention to what they have done well in writing will increase their sense of attainment value. Respondents did not agree that writing provided them intrinsic value because they did not view it as fun or exciting. Creating writing assignments that engage students in something they are interested in might increase both utility and intrinsic value. Intrinsic value could also be increased by having experts come in to teach a module on writing. Instructors not as comfortable with teaching writing should consider reaching out to specialized faculty or campus writing centers to have guest speakers teach about effective writing techniques to increase intrinsic value.

Agricultural educators could also help to address general self-efficacy and writing apprehension in the classroom. Respondents in the study agreed they possessed self-efficacy but teaching students problem-solving skills or resiliency could help to further strengthen their perceptions of self-efficacy. Additionally, exposing students to campus resources for tutoring or writing support could help them feel a greater sense of self-efficacy for writing specifically. Students' writing apprehension appeared mostly related to the amount of time writing takes along with the fear of professional evaluation. The previously described recommendations related to self-efficacy could also lessen students' writing apprehension if they are able to find useful resources to manage their time writing (Autman & Kelly, 2017; Fischer & Meyers, 2017). Providing students with constructive criticism for how to improve their writing and what they did well may also help to alleviate writing apprehension related to evaluation. Students did not appear as concerned when it came to their writing being reviewed by peers, so peer reviews could also be used to increase self-efficacy and decrease writing apprehension (Fischer & Meyers, 2017). Agricultural educators should work on sharing these concepts with other faculty in their college of agriculture to help them incorporate effective writing assignments in their classes.

Future analysis should include structural equation modeling to identify the direct and indirect effects the variables have on expectancy to succeed at writing. This analysis would help to further define the conceptual model developed for this research. Additionally, this study was limited to freshman in the College of ACES at UIUC. Their mostly positive perceptions related to writing might be due to their lack of writing experience and evaluation at a university level. However, the findings indicated a high probability of successfully motivating freshman at UIUC to learn how to write effectively if they are consistently and appropriately taught during the remainder of their time at the institution. Replicating this study with juniors, seniors, and transfer students, may yield different results that indicate students' value in writing changes during their academic career. A longitudinal study could be one way to track how the respondents' motivation to possess effective writing skills change over time. Another potential avenue for research would be exploring how demographic characteristics, like gender, plans after graduation, and major impact perceived value in writing and expectations for success.

One limitation to this study was it did not provide a definition of “effective writing” to the students. The respondents may be interpreting the questions differently from each other, so including a definition in future research could help to strengthen the validity of the study. Additionally, the general self-efficacy measure recommended by Autman and Kelly (2017) did not specifically ask about writing. Students’ general perceptions of self-efficacy may differ from their writing self-efficacy. Future research should measure writing self-efficacy to identify any differences in findings. Additionally, altering the sampling methods to include students across all majors in the College of ACES may further validate the findings. Another limitation to this study was it was purely quantitative. Conducting follow-up, qualitative research in the form of interviews or focus groups could provide researchers with a more nuanced understanding for how students perceive writing and what motivates them to become effective writers. Crafting an experimental design to test different interventions to increase attainment value, utility value, intrinsic value, and self-efficacy and decrease writing apprehension could also help to provide educators with evidence-based strategies to increase students’ expectancy for success in writing.

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