

Kill the Stigma! Teacher Expectancy in the Information Literacy Classroom

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What would happen if we were to consciously and carefully provide experiences that would lead people to conceptions of themselves as able, worthy, acceptable, loved and wanted? [...] What kind of society might we produce if we were honestly to set ourselves the task of designing experiences to challenge children without threatening them?"¹

In 1979, Arthur Combs, author of the above quote, asks educators to envision a learning environment rich with confidence. When talking to colleagues from different disciplines and across various institutions, there is a pervasive concern regarding the ill preparedness of incoming college students. Confidence in student performance is low. Those stereotypes and assumptions warrant our attention and are not to be ignored. These anticipatory beliefs held by the teaching faculty hold regarding student performance have negative impacts on the learning environment. Unrealistic or inaccurate expectations set in motion an environment of inequitable learning that often result in self-fulfilling prophecies evident in student performance. Those teaching information literacy are not exempt from these learning stigmas and when looking more specifically at student preparedness in the information literacy classroom, results from a recent case study confirm that a critical percentage of students are entering college with far less research and writing experience in high school

than one would expect.² The discrepancy in student preparedness and teacher expectations on performance can create a bias in the classroom. The term bias invokes no limit to how prejudicial actions and dispositions can manifest themselves, but it is important to remember that bias is not always as overt as inequitable treatment of students based on class, physical appearance, or socioeconomic standing. Bias also finds foothold in teacher attitudes and expectations of student performance, known as "teacher expectancy." Bias can find its foothold in teacher attitudes and expectations of student performance, known as "teacher expectancy." In my own experience, I realized I was relying on some very dated and inaccurate assumptions of student behavior and experience. I found myself assessing students *ad nauseam*, with an attitude of "It's you, not me." Still unsatisfied with the effectiveness of my teaching, I shifted the blame away from the students and back on to me. An "It's me, not you" attitude forced me to look at my teacher expectancies and biases, an uncomfortable process with many rewards including a more confident classroom for both teacher and students. This paper aims to bring awareness to the impact of teacher bias in an information literacy classroom and is a contribution to an on-going conversation about the discrepancies between student preparedness and performance and teacher expectations *vis-à-vis* the role of critical thinking in higher education and the proposed ACRL framework.

Teacher Expectancy: A Review of Literature

Background and Definitions

The phenomenon of “teacher expectancy” has been a focus of research for much of the 20th century. As Robert Rosenthal reports in “Pygmalion in the Classroom,” the phenomenon of a self-fulfilling prophecy in a sociological context was made by Merton in 1948. Prior to that, the concept of a self-fulfilling prophecy had only been applied in a clinical context by Albert Moll in the late nineteenth century.³ The phenomenon emerged in the education setting in the mid-twentieth century. In the late 1960s, Rosenthal’s own research in trying to link “experimenter bias” to bias in the classroom,⁴ identified that the self-fulfilling prophecy cycle may actually be a product of a teacher’s expectations, that students will only reach the level of expectation set forth by the teacher rather than a self-imposed expectation.⁵ Rosenthal describes it as the “Pygmalion Effect” which is “how one person’s expectations for another person’s behavior can quite unwittingly become a more accurate prediction simply for its having been made.”⁶ The “Pygmalion Effect” takes into account both positive (Galatea) and negative (Golem) effects.⁷

The methodology of the Rosenthal study, “The Harvard Test of Inflected Acquisition,” later known as “The Pygmalion Study,” included giving teachers inaccurate information indicating first and second graders’ intellectual competence and potential. At the end of the school year, Rosenthal measured to see if those students actually did learn more. They found that there was a correlation to teacher expectations and student performance. “Overall, the children from whom the teachers had been led to expect greater intellectual gain showed a significantly greater gain than did the children of the control group, thereby supporting the “Pygmalion “Hypothesis.”⁸ The study and findings had strong reactions and was considered controversial since there was repeated failure to duplicate the effect.⁹ During next several decades, the definition and identity of the “Pygmalion Effect” morphed into its current theory of “teacher expectancy,” the teach-

er’s unconscious actions and beliefs that hinder teaching and learning by imposing either accurate or inaccurate expectancies on students’ abilities. Do students learn more if teachers’ behavior, attitude, and/or bias is corrected, modified, or eradicated?

Theories Related to “Teacher Expectancy”

When looking at “teacher expectancy,” it is helpful to mention the other closely related theories of teaching and learning. TE accounts for only a portion of the teaching and learning ecosystem dealing with bias. There are many other manifestations of internal and external biases that complete the intricate learning environment.

The “Coleman Report” and institutional barriers: School quality has little consequences for student learning. “The researchers found that academic achievement was less related to the quality of a student’s school, and more related to the social composition of the school, the student’s sense of control of his environment and future, the verbal skills of teachers, and the student’s family background.”¹⁰

Emotional labor of teaching: The relationships between students and teachers impact their interaction.¹¹ It is fair to say that the one-shot information literacy model creates a severe deficit in the student/teacher relationship, therefore impeding a meaningful student/teacher bond.

Halo effect: An instructor’s assumptions of one student are applied to the entire class. A student is “guilty by association.”¹²

Impostor phenomenon: “The term impostor phenomenon is used to designate an internal experience of intellectual phonies, which appears to be particularly prevalent and intense among a select sample of high achieving women.”¹³ In other words, self-imposed expectancies hinder performance.

Spotlight effect: The phenomenon “that people overestimate the extent to which their actions and appearance are noted by others.”¹⁴

Stereotype threat: Students bring their own baggage and their behavior reinforces those negative stereotypes.¹⁵ There is some research that links the phe-

nomenon of stereotype threat to the phenomenon of library anxiety.¹⁶

Stigma consciousness: One's awareness of negative stereotypes.¹⁷ Students bring their own baggage, person's expectations of being judged, victimized.

Assessment of "Teacher Expectancy"

Once the phenomenon of "teacher expectancy" was identified, a multitude of studies followed, attempting to measure the characteristics and factors that led to a predisposition or susceptibility, such as gender, race, nationality, age.¹⁸ Babad, et al. argue that some teachers are more susceptible to transmitting expectancies than others. They measured that susceptibility affects 25% of teachers.¹⁹ Teachers least likely to transmit "teacher expectancy" exhibited the following characteristics: democratic, open-minded, flexible, equitable, balanced, and friendly.²⁰ Babad finds that a teacher's age is more of a predictor of expectancies than a teacher's education.²¹

Teaching styles also contribute to the propensity to transmit a high bias and a strong Golem effect is also found in particular teaching styles, such as those teachers who were more dogmatic and authoritarian in their attitudes and subsequent behavior towards students who were identified as having low potential.²² Harris and Rosenthal, (1973) identified four behaviors that transmit teacher expectancy, either positively or negatively.²³ They include: 1. creating a warm classroom climate, 2. providing positive feedback such as praise, 3. providing relevant opportunities for student "input," i.e. developing appropriate challenging class materials, and 4. forthcoming in appropriate teacher output by way of prompts. Common classroom management mistakes also contribute to a high bias environment. For example trying to cover too much material, over emphasis or unbalanced reinforcement of incorrect answers, delay in reacting to student input, no follow through or partial follow through with consequences, dealing with problems in the classroom, inappropriate or poorly timed (such as in the classroom as opposed to waiting for privacy) consequences.²⁴

One might think that the one-shot information literacy classroom is a low-bias environment. But, one-shot instruction sessions lack a working relationship between the teacher and the student. "To be vital, to produce genuine thinking and relative habits of mind, education ...requires opportunities of give-and-take, in some degree of intimacy between the student as an individual and teachers who themselves exhibit a spirit of inquiry, rational deliberation, of intellectual creativity, of honest judgment."²⁵ Teaching librarians may not have enough of a rapport with the students. Teaching librarians might risk leaning towards the halo effect of teacher expectancies, assuming that a particular trait for one to be true for all. Classroom management is also an issue in the one-shot session as it affords little room to execute follow-through or consequences.

What Are We Really Teaching? Is Critical Thinking Still the Hallmark of American Higher Education?

While reflecting on "teacher expectancies," I also scrutinized the discrepancy in expectations of materials to be covered in information literacy sessions. Rather than focus on skills, I taught to the more conceptual aspects of research that include problem solving and higher-level knowledge execution. In other words, I was teaching critical thinking.²⁶ Yet students were reluctant to this material. The discrepancy I witnessed in my classroom echoed a known predisposition to a lack of commitment on the student's behalf. "Many students come to college not only poorly prepared by prior schooling for highly demanding academic tasks that ideally lie in front of them, but—more troubling—they enter college with attitudes, norms, values, and behaviors that are often at odds with academic commitment..."²⁷ Students are capable of adapting to a higher level of performance but are not receptive. The tendency to teach specific information literacy skills rather than concepts is an example of and continues the erosion of critical thinking's place in the core mission of higher education. Do we ignore the discrepancy and teach to their wants? As Goheen

asked in 1969, do we want to produce generations of graduates who are “unconcerned with the fundamental principles on which their specialties rest?”²⁸ or do we want to encourage questioning, “informed by intelligence and conscience”?²⁹

Critical thinking is not new to the central mission of higher education, in fact, it’s been at the core of higher education’s mission since its inception in Europe. Focus on this mission started to blur over the centuries. In 2005, in an address to the American Association of University Professors regarding student academic freedom, Professor Joan Scott states that good teachers “inspire students to think differently about the world; ... It is precisely the experience of this kind of education that opens students’ minds and engages them in learning, sets them out on paths they never knew they could take. That has been the critical thinking that is the hallmark of American education—an education designed to create thinking citizens for a free society”³⁰ Recently, loyalty to teaching critical thinking has been gravely weakened by the demands for accreditation, graduation rates, student retention, and assessment.

Student Aptitude and Attitudes, Past and Present

If critical thinking is “primarily an attitude about ideas, a disposition toward knowing,”³¹ then our job as teaching librarians is to cultivate that disposition in our students. A fairly recent history of students show that they want more pragmatic, applied instruction at the university rather than the more and supposedly detached from reality theoretical teachings.³² Factors that work against the mission of teaching critical thinking is data confirming that students are coming into college with such inadequate levels of preparation that they must spend much of their early coursework in remedial education classes where “gains in higher-order critical thinking and complex reasoning are unlikely to occur.”³³ There is also evidence that suggests that college students’ academic effort has dramatically declined in recent decades. Lack of focus, less time for classes, selection of less rigorous courses... paired

with a prevalent “college for all” attitude contribute to academic rigorlessness.³⁴ “High school students expect to enroll in college and complete bachelor’s degrees, even when they are poorly prepared to do so judging from their grade point averages, high school rank, and courses taken.”³⁵ As one student puts it, “even if I don’t work hard in high school, I can still make my future plans come true.”³⁶ It has been argued that college has been made easier and that we are lowering the bar for student performance.³⁷ For example, there is grade inflation, lighter workload, buying papers online, and college credit for high school coursework or tests. “Education should not be intended to make people comfortable, it is meant to make them think. Universities should be expected to provide the conditions within which hard thought, and therefore strong disagreement, independent judgment, and the questioning of stubborn assumptions, can flourish in an environment of the greatest freedom.”³⁸ If teachers remove these bias and expectations by way of stereotypes, perhaps it will help students create a more positive identity of themselves and therefore help students achieve more. “Since people behave in terms of what they believe about themselves, such labels may also become self-fulfilling.”³⁹ On a more positive note, and working in favor of attitudes on student performance is that today’s student is more connected globally. Access to an ever-expanding universe of knowledge allows them to be less isolated. “Students are more serious and more aware of the outside world,”⁴⁰ which creates higher stakes and increases motivation to succeed. The questions that remains is, how does this manifest in the information literacy classroom and how can we apply what we know about our students to create an environment free of bias?

Teaching Librarian Survey Methodology, Results and Discussion

“Teacher expectancy” is a very different beast in the information literacy classroom. I wanted to measure those expectations that teaching librarians were bringing into the classroom.⁴¹ Librarians have completely different sets of expectancies when compared to other

disciplines due to the nature of the one-shot format. Expectations are insidious, less overt, as teaching librarians have little to no connection to the individual student or to the unique micro-community established in the cohort of a semester-long class. There are a multitude of anecdotes that hint at dissatisfaction in teaching librarians; including anecdotes such as the Google effect, “they all want to use Google, they only want to look at the first list of results, they only want to cut and paste.”⁴² There is also the ubiquitous complaint that students only use Wikipedia. Mass media is not a recent problem on the educational scene. As early as 1969, mass communication was seen as a threat to teaching and learning. “Just because mass communication has won such a dominant position in so many areas of our life, we need to work harder.”⁴³ In addition to the lack of a meaningful relationship with students, instruction librarians have little to no access to the majority of data that can help us gauge realistic student performance, we are set up to create one-size fits all lesson plans or worse, rely on stereotypes, knowingly or not.

The process of my research has been just as important as the results of my research. This paper is not an isolated event; it is part of an expansive and recursive research agenda lasting many years, a moveable feast trying to unravel the mystery of effective teaching. I’ve been teaching information literacy for Western Michigan University’s (WMU) first year writing program for over five years. In year two of my experience, I realized that something wasn’t working with the one-shot teaching session. My first reaction was, “it’s you, not me.” I launched a study to measure incoming first-year students experience with research and writing in hopes of affirming my suspicions that students were not exposed to research as a discipline. The study did confirm this; however, there was a gross misjudgment on my part in their experience in writing. I opted to look at writing experience and research experience. Reading, research, and writing together create the Venn diagram that defines academic work. I found that a much higher percentage of students were coming into college with little to no experience with

writing a formal research paper. This number completely annihilated my unsubstantiated notion that all students wrote papers in high school, basing it off of my own experience from almost 30 years ago. This discovery lead me to rethink how to teach information literacy, not as an isolated or stand-alone discipline reinforced by the one-shot instruction method, but to connect it more closely to the writing process, which ultimately lead to the discovery of rhetoric. Information literacy is another facet of rhetoric, the art of argument and exchange of ideas. This helped me link information literacy to the core mission of higher education, critical thinking. I was then able to (drastically and confidently) restructure the content of my teaching, particularly for WMU’s first year writing course. The most important outcome of this process was that I shifted blame away from the students and highlighted the deficits I brought into the classroom. What expectancies or bias was I bringing into the classroom that hindered the learning experience and how could I remedy them? Was it a singular instance in me or was did it affect other instructors?

The survey that I launched in the winter of 2014 is somewhat of a by-product of my initial research agenda. I do not want to say after thought, but it wasn’t until late in the research process that I wanted to compare my expectations with those of my colleagues at different institutions. It was the natural progression of the research process. I wanted to find out if there a pattern unique to our discipline or a pattern that confirms the earlier studies on teacher expectancies? Can we predict susceptibility? Is there evidence in disparities in teaching and learning? In the winter of 2014, I developed a questionnaire with 28 questions loosely connected to the “Star Teacher Pre-Screening” test, a 50-question multiple-choice questionnaire designed to identify individuals who possess the known characteristics of successful (who transmit low bias) schoolteachers.⁴⁴ I advertised the survey on two information literacy-focused listservs hosted by the American Library Association: *ili-l* and *infolit-l* @ *lists.ala.org*. I wanted to elicit responses from librarians across the country. I limited participation to just

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those librarians who teach information literacy in an institution of higher education. The survey is not intended to be definitive; it serves more as an entry into a longer study that I hope to carry out in the near future. The questions are a mix of demographic, questions, and questions measuring teacher attitude. (See appendix A for survey questions.) There were 291 respondents with 225 surveys being valid.

The survey questions relate primarily to teacher confidence and teacher expectations on student preparedness and performance. They have been cross-referenced with variables including age, gender, and education. Holding an additional higher degree does not impact our attitudes on any of the questions, nor does having completed any formal coursework on teaching. Teaching experience beyond that of teaching information in an academic library does affect the responses either. A factor that impacts the survey results in general is time. Age of respondent, time since

degree earned, and number of years teaching information literacy seem to have the most impact in creating trends among certain population groups. This confirms the results of the results mentioned earlier in this paper by Babad, et al. that age is the strongest predictor of susceptibility to high bias. Below is a sampling of some of the more relevant results, even if self-reported. Q3, Q4, Q6 measure teacher confidence while Q4, Q10 measure teacher bias.

Of all respondents 79 graduated 1-5 years ago, 49 graduated 6-10 years ago, 33 graduated 11-15 years ago, and 58 graduated 16 or more years ago.

Of all respondents, have taught for 17 have taught less than one year, 83 have taught 2-5 years, 51 6-10 years, 24 11-15 years, and 35 16 or more years.

Of all respondents,⁴⁵ 4 identified themselves as belonging to Generation Z, 58 as Millennials, 114 are Gen Xs, 53 Baby Boomers, 2 to the Silent Generation, and 11 self-identified as other.

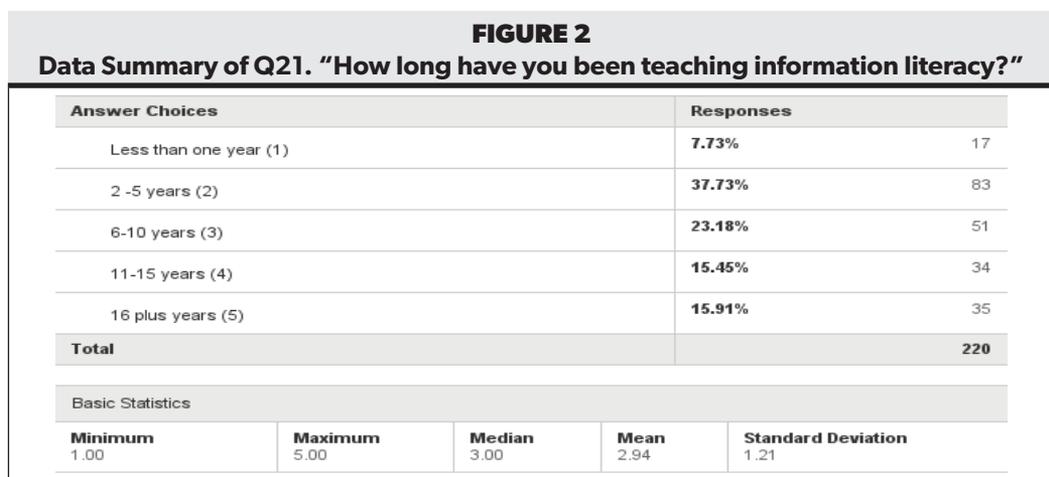
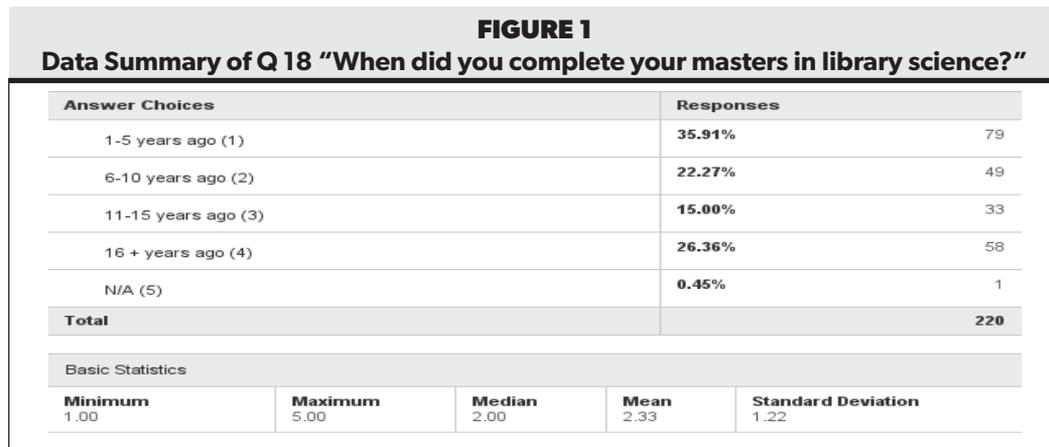


FIGURE 3
Data Summary of Q25. Distribution of Respondents by Generation

Answer Choices		Responses		
Generation Z (typically between 95-2000) (1)		1.83%	4	
Millennial Generation/Generation Y (typically born between mid eighties to early 2000s) (2)		26.61%	58	
Generation X (typically born between mid sixties to early eighties) (3)		52.29%	114	
Baby Boomer Generation (typically born between 43-60) (4)		24.31%	53	
Silent Generation (typically born between 25-42) (5)		0.92%	2	
Other/None (6)		5.05%	11	
Total Respondents: 218				
Basic Statistics				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	6.00	3.00	3.10	0.98

Teacher Confidence

In looking at the data summaries of Q3, “I have realistic expectations regarding incoming student IL proficiencies” by years teaching and years since degree earned, we get very similar results. Time increases the

likelihood that a teacher is susceptible to transmitting high bias in the classroom. We are split fairly equally with a 60/40 split between agreeing or disagreeing with Q3’s statement. That split closes to a 50/50 split the more recent a librarian has receive her degree

FIGURE 4
Data Summary of Q3. “I have realistic expectations regarding incoming student IL proficiencies.” By years since degree earned

	Strongly agree (1)	Agree (2)	Disagree (3)	Strongly disagree (4)	Total
1-5 years ago	26.58% 21	67.09% 53	6.33% 5	0.00% 0	79
6-10 years ago	26.53% 13	71.43% 35	2.04% 1	0.00% 0	49
11-15 years ago	39.39% 13	54.55% 18	6.06% 2	0.00% 0	33
16 + years ago	36.21% 21	60.34% 35	3.45% 2	0.00% 0	58
N/A	0.00% 0	100.00% 1	0.00% 0	0.00% 0	1
Total Respondents	68	142	10	0	220
Basic Statistics					
	Minimum	Maximum	Median	Mean	Standard Deviation
1-5 years ago	1.00	3.00	2.00	1.80	0.54
6-10 years ago	1.00	3.00	2.00	1.76	0.48
11-15 years ago	1.00	3.00	2.00	1.67	0.59
16 + years ago	1.00	3.00	2.00	1.67	0.54
N/A	2.00	2.00	2.00	2.00	0.00

FIGURE 5
Data Summary of Q3. "I have realistic expectations regarding incoming student IL proficiencies." By generation

	Strongly agree (1)	Agree (2)	Disagree (3)	Strongly disagree (4)	Total
Gen Z	25.00% 1	75.00% 3	0.00% 0	0.00% 0	4
Millennials	31.03% 18	62.07% 36	6.90% 4	0.00% 0	58
Gen X	35.96% 41	59.65% 68	4.39% 5	0.00% 0	114
Baby Boomers	22.64% 12	77.36% 41	0.00% 0	0.00% 0	53
Silent Generation	0.00% 0	100.00% 2	0.00% 0	0.00% 0	2
Other None	36.36% 4	63.64% 7	0.00% 0	0.00% 0	11
Total Respondents	67	142	9	0	218

Basic Statistics					
	Minimum	Maximum	Median	Mean	Standard Deviation
Gen Z	1.00	2.00	2.00	1.75	0.43
Millennials	1.00	3.00	2.00	1.76	0.57
Gen X	1.00	3.00	2.00	1.68	0.55
Baby Boomers	1.00	2.00	2.00	1.77	0.42
Silent Generation	2.00	2.00	2.00	2.00	0.00
Other None	1.00	2.00	2.00	1.64	0.48

FIGURE 6
Data Summary of Q3. "I have realistic expectations regarding incoming student IL proficiencies." By number of years teaching

	Strongly agree (1)	Agree (2)	Disagree (3)	Strongly disagree (4)	Total
Less than one year	35.29% 6	58.82% 10	5.88% 1	0.00% 0	17
2-5 years	22.89% 19	69.88% 58	7.23% 6	0.00% 0	83
6-10 years	27.45% 14	72.55% 37	0.00% 0	0.00% 0	51
11-15 years	38.24% 13	58.82% 20	2.94% 1	0.00% 0	34
16 plus years	45.71% 16	48.57% 17	5.71% 2	0.00% 0	35
Total Respondents	68	142	10	0	220

Basic Statistics					
	Minimum	Maximum	Median	Mean	Standard Deviation
Less than one year	1.00	3.00	2.00	1.71	0.57
2-5 years	1.00	3.00	2.00	1.84	0.53
6-10 years	1.00	2.00	2.00	1.73	0.45
11-15 years	1.00	3.00	2.00	1.65	0.54
16 plus years	1.00	3.00	2.00	1.60	0.60

FIGURE 7
Graph of Q6. "I am confident in my understanding of student learning." By years since degree earned

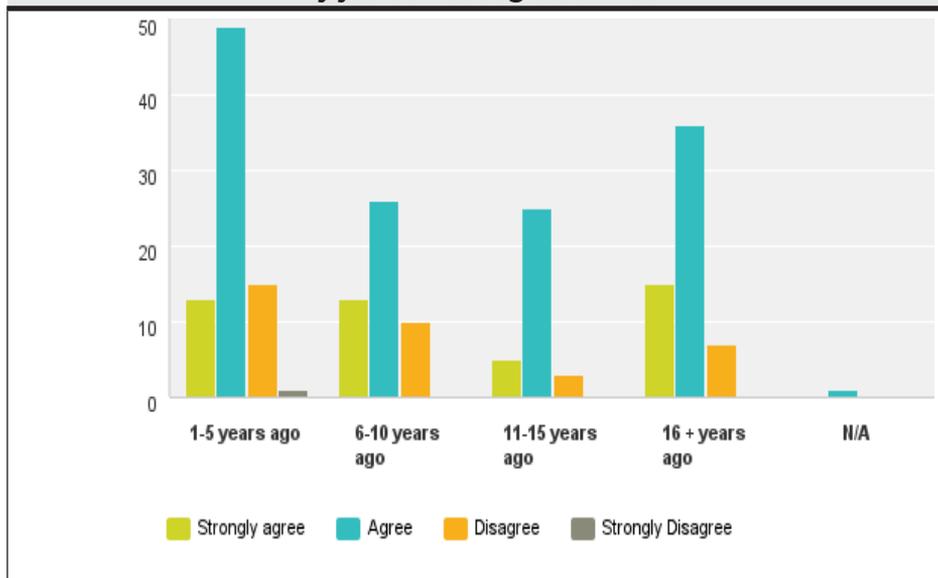


FIGURE 8
Data Summary of Q6. "I am confident in my understanding of student learning."
By years since degree earned

	Strongly agree (1)	Agree (2)	Disagree (3)	Strongly Disagree (4)	Total
1-5 years ago	16.67% 13	62.82% 49	19.23% 15	1.28% 1	78
6-10 years ago	26.53% 13	53.06% 26	20.41% 10	0.00% 0	49
11-15 years ago	15.15% 5	75.76% 25	9.09% 3	0.00% 0	33
16 + years ago	25.86% 15	62.07% 36	12.07% 7	0.00% 0	58
N/A	0.00% 0	100.00% 1	0.00% 0	0.00% 0	1
Total Respondents	46	137	35	1	219

Basic Statistics					
	Minimum	Maximum	Median	Mean	Standard Deviation
1-5 years ago	1.00	4.00	2.00	2.05	0.64
6-10 years ago	1.00	3.00	2.00	1.94	0.68
11-15 years ago	1.00	3.00	2.00	1.94	0.49
16 + years ago	1.00	3.00	2.00	1.86	0.60
N/A	2.00	2.00	2.00	2.00	0.00

and by years teaching. When looking at Q3 by age of respondent, we get very similar results. Time teaching seems to increase the likelihood that a teacher is susceptible to higher bias. As a discipline, there is not dominant opinion. Q3 by age show strong teacher confidence. Another interpretation of the close split in opinion is that there is no dominant attitude in the discipline.

It appears from the results that teacher confidence is always in flux as seen in the results from Q6. "I am confident in my understanding of student learning." In looking at Q6 cross-referenced by factors of time (years since degree earned, years teaching, and age), there seems to be a dip in confidence mid-career. This doesn't mean that teacher confidence and teacher bias is non-existent in the earlier years of a librarian's career. Q6, when cross-referenced by years teaching, shows a downward trend in teacher confidence. Q6 cross-referenced by age shows a gradual decline in teacher confidence the older the teacher is. (See figure 10.) This question tells us that teachers feel that they are confident in their understanding of student

learning, but when compared to Q3, regarding realistic expectations, there is a disparity. How can we as a discipline be so confident in understanding student learning if our expectations vary so widely? This confidence rate increases over time since degree earned.

Education and professional development is a factor to consider. 60% percent of respondents have had formal coursework on some aspect of teaching. The questions with the most significantly different responses from the survey related to teacher confidence when analyzed by respondents having had formal coursework on teaching. Confidence drops significantly with teachers who did not report having had formal coursework.

Teacher Expectations On Student Preparedness and Performance

In reviewing the data of Q4. "All incoming freshmen should be capable of demonstrating a basic level of proficiency in IL" by years since degree earned. In looking at teacher expectations of incoming high school students, responses are split between agree or

FIGURE 9
Data Summary of Q6. "I am confident in my understanding of student learning."
By number of years teaching

	Strongly agree (1)	Agree (2)	Disagree (3)	Strongly Disagree (4)	Total	Basic Statistics				
						Minimum	Maximum	Median	Mean	Standard Deviation
Less than one year	23.53% 4	58.82% 10	17.65% 3	0.00% 0	17	1.00	3.00	2.00	1.94	0.64
2-5 years	17.07% 14	60.98% 50	20.73% 17	1.22% 1	82	1.00	4.00	2.00	2.06	0.65
6-10 years	21.57% 11	60.78% 31	17.65% 9	0.00% 0	51	1.00	3.00	2.00	1.96	0.62
11-15 years	20.59% 7	76.47% 26	2.94% 1	0.00% 0	34	1.00	3.00	2.00	1.82	0.45
16 plus years	28.57% 10	57.14% 20	14.29% 5	0.00% 0	35	1.00	3.00	2.00	1.86	0.64
Total Respondents	46	137	35	1	219					

FIGURE 10
Data Summary of Q6. "I am confident in my understanding of student learning."
By generation

	Strongly agree (1)	Agree (2)	Disagree (3)	Strongly Disagree (4)	Total
Gen Z	25.00% 1	75.00% 3	0.00% 0	0.00% 0	4
Millennials	15.79% 9	70.18% 40	12.28% 7	1.75% 1	57
Gen X	23.68% 27	60.53% 69	15.79% 18	0.00% 0	114
Baby Boomers	20.75% 11	62.26% 33	16.98% 9	0.00% 0	53
Silent Generation	50.00% 1	0.00% 0	50.00% 1	0.00% 0	2
Other/None	45.45% 5	27.27% 3	27.27% 3	0.00% 0	11
Total Respondents	45	136	35	1	217

Basic Statistics					
	Minimum	Maximum	Median	Mean	Standard Deviation
Gen Z	1.00	2.00	2.00	1.75	0.43
Millennials	1.00	4.00	2.00	2.00	0.59
Gen X	1.00	3.00	2.00	1.92	0.62
Baby Boomers	1.00	3.00	2.00	1.96	0.61
Silent Generation	1.00	3.00	2.00	2.00	1.00
Other/None	1.00	3.00	2.00	1.82	0.83

FIGURE 11
Graph of Q 2. "I am effective in teaching IL to students of any level."
By formal coursework in teaching

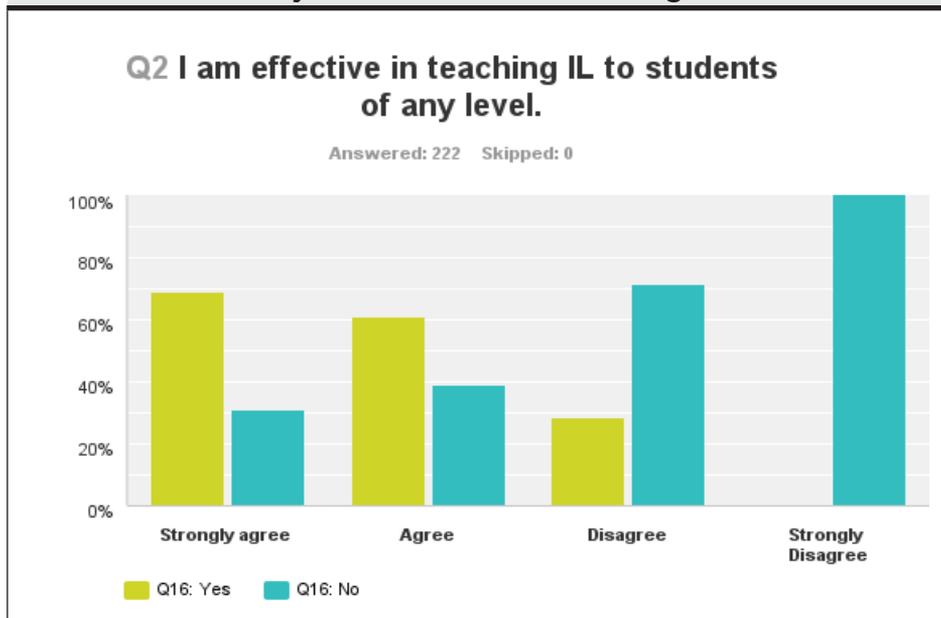


FIGURE 12
Data Summary of Q4. "All incoming freshmen should be capable of demonstrating a basic level of proficiency in IL."
By years since degree earned

	Strongly agree (1)	Agree (2)	Disagree (3)	Strongly Disagree (4)	Total
1-5 years ago	15.19% 12	37.97% 30	45.57% 36	1.27% 1	79
6-10 years ago	10.20% 5	55.10% 27	34.69% 17	0.00% 0	49
11-15 years ago	21.21% 7	45.45% 15	30.30% 10	3.03% 1	33
16 + years ago	10.34% 6	53.45% 31	32.76% 19	3.45% 2	58
N/A	0.00% 0	0.00% 0	100.00% 1	0.00% 0	1
Total Respondents	30	103	83	4	220

Basic Statistics					
	Minimum	Maximum	Median	Mean	Standard Deviation
1-5 years ago	1.00	4.00	2.00	2.33	0.74
6-10 years ago	1.00	3.00	2.00	2.24	0.62
11-15 years ago	1.00	4.00	2.00	2.15	0.78
16 + years ago	1.00	4.00	2.00	2.29	0.70
N/A	3.00	3.00	3.00	3.00	0.00

FIGURE 13
Data Summary of Q4. "All incoming freshmen should be capable of demonstrating a basic level of proficiency in IL." By number of years teaching.

	Strongly agree (1)	Agree (2)	Disagree (3)	Strongly Disagree (4)	Total
Less than one year	11.76% 2	47.06% 8	41.18% 7	0.00% 0	17
2-5 years	12.05% 10	44.58% 37	42.17% 35	1.20% 1	83
6-10 years	15.69% 8	43.14% 22	39.22% 20	1.96% 1	51
11-15 years	20.59% 7	55.88% 19	23.53% 8	0.00% 0	34
16 plus years	11.43% 4	45.71% 16	37.14% 13	5.71% 2	35
Total Respondents	31	102	83	4	220

Basic Statistics					
	Minimum	Maximum	Median	Mean	Standard Deviation
Less than one year	1.00	3.00	2.00	2.29	0.67
2-5 years	1.00	4.00	2.00	2.33	0.70
6-10 years	1.00	4.00	2.00	2.27	0.74
11-15 years	1.00	3.00	2.00	2.03	0.66
16 plus years	1.00	4.00	2.00	2.37	0.76

disagree when cross-reference with three different variables, those of number of years teaching, years since degree earned, and age of teacher. The responses are rather equally split between positive and negative views of student preparedness. The split hovers near 60/40, except that drops closer to 50/50 for newer, younger instructors. As a discipline, there is not dominant opinion as to the preparedness of incoming students, which means this attitude is very susceptible to teacher bias.

In reviewing the data of Q10, "A student has a certain amount of intelligence and teachers really can't do much to change it" by number of years teaching, there is a

definite increase in teacher expectancy the longer the respondent has taught. When analyzing Q10 by generation or age of respondent. The results are much more unified when analyzing teacher expectancies by generation and do not follow the same increase as seen when analyzing Q10 by number of years teaching, shown in figure 14. When looking at Q10 by years since degree earned.

Other Results that Need to be Looked at More Closely

Due to time and space constraints for the ACRL conference, I was not able to explore all of the results as closely as they deserved. For example, a few ques-

FIGURE 14
Graph of Q4. "All incoming freshmen should be capable of demonstrating a basic level of proficiency in IL." By generation.

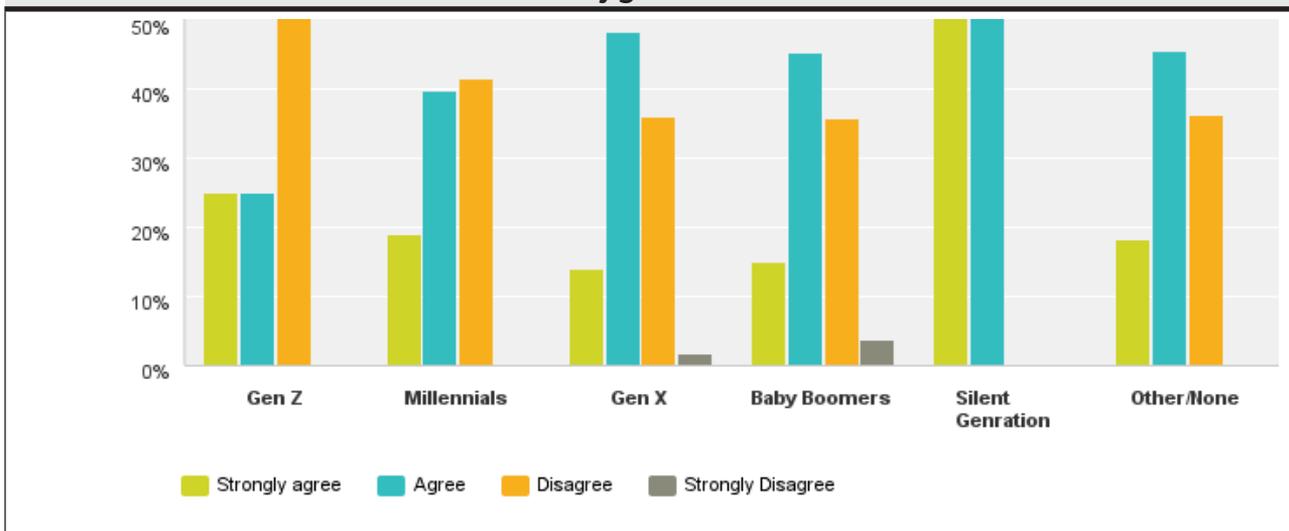


FIGURE 15

Data Summary of Q10. "A student has a certain amount of intelligence and teachers really can't do much to change it." By number of years teaching.

	Strongly agree (1)	Agree (2)	Disagree (3)	Strongly Disagree (4)	Total	Basic Statistics					
							Minimum	Maximum	Median	Mean	Standard Deviation
Less than one year	0.00% 0	0.00% 0	62.50% 10	37.50% 6	16	Less than one year	3.00	4.00	3.00	3.38	0.48
2 -5 years	1.22% 1	12.20% 10	63.41% 52	23.17% 19	82	2 -5 years	1.00	4.00	3.00	3.09	0.63
6-10 years	0.00% 0	11.76% 6	72.55% 37	15.69% 8	51	6-10 years	2.00	4.00	3.00	3.04	0.52
11-15 years	0.00% 0	23.53% 8	52.94% 18	23.53% 8	34	11-15 years	2.00	4.00	3.00	3.00	0.69
16 plus years	0.00% 0	22.86% 8	51.43% 18	25.71% 9	35	16 plus years	2.00	4.00	3.00	3.03	0.70
Total Respondents	1	32	135	50	218						

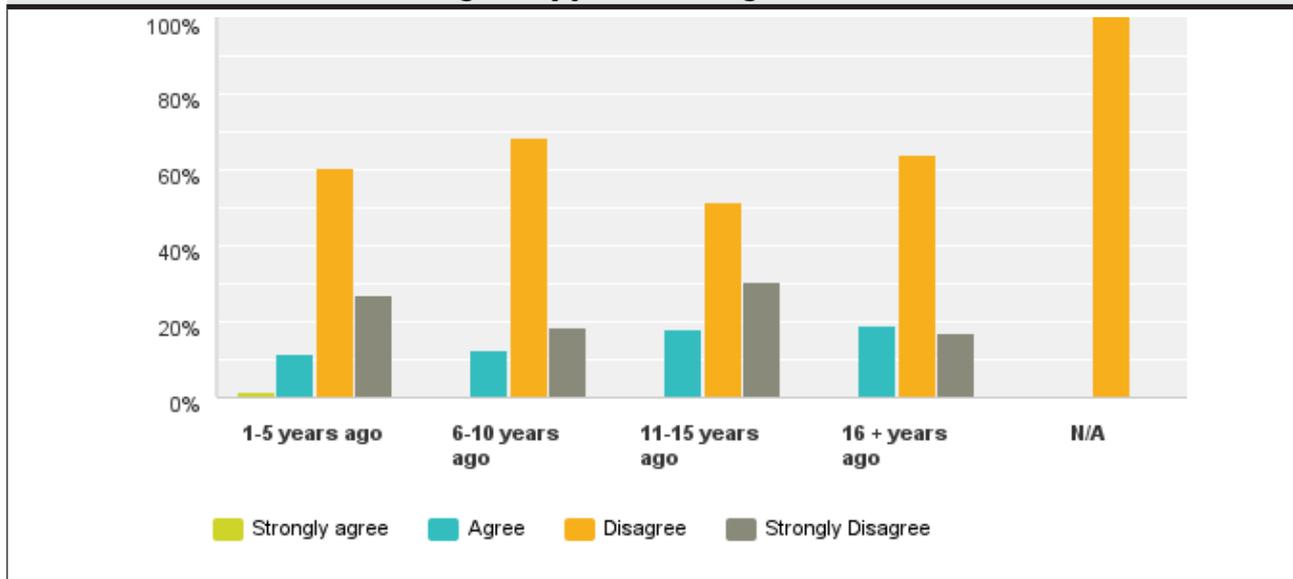
FIGURE 16

Data Summary of Q10. "A student has a certain amount of intelligence and teachers really can't do much to change it." By generation or age.

	Strongly agree (1)	Agree (2)	Disagree (3)	Strongly Disagree (4)	Total	Basic Statistics					
							Minimum	Maximum	Median	Mean	Standard Deviation
Q26: Generation Z (typically between 95-2000)	0.00% 0	25.00% 1	75.00% 3	0.00% 0	4	Q26: Generation Z (typically between 95-2000)	2.00	3.00	3.00	2.75	0.43
Q26: Millennial Generation/Generation Y (typically born between mid eighties to early 2000s)	1.72% 1	6.90% 4	63.79% 37	27.59% 16	58	Q26: Millennial Generation/Generation Y (typically born between mid eighties to early 2000s)	1.00	4.00	3.00	3.17	0.62
Q26: Generation X (typically born between mid sixties to early eighties)	0.00% 0	13.27% 15	62.83% 71	23.89% 27	113	Q26: Generation X (typically born between mid sixties to early eighties)	2.00	4.00	3.00	3.11	0.60
Q26: Baby Boomer Generation (typically born between 43-60)	0.00% 0	22.64% 12	64.15% 34	13.21% 7	53	Q26: Baby Boomer Generation (typically born between 43-60)	2.00	4.00	3.00	2.91	0.59
Q26: Silent Generation (typically born between 25-42)	0.00% 0	0.00% 0	50.00% 1	50.00% 1	2	Q26: Silent Generation (typically born between 25-42)	3.00	4.00	3.50	3.50	0.50
Q26: Other/None	0.00% 0	30.00% 3	50.00% 5	20.00% 2	10	Q26: Other/None	2.00	4.00	3.00	2.90	0.70
Total Respondents	1	30	136	49	216						

FIGURE 17

Graph of Q10. "A student has a certain amount of intelligence and teachers really can't do much to change it" by years since degree earned.



tions that I would like to explore more closely in future publications include teacher attitudes on how we measure student preparedness. What data do we need in order to assess incoming students? A discrepancy that I would like to explore more closely is that the majority of respondents state that there are many factors that contribute to student learning, either positively or negatively, (Q 9). However, when asked if it is important to look at prior academic achievement in order to effectively assess actual student preparedness (Q5), the majority of respondents say no. What factors do we consider to be important in assessing student preparedness?

Conclusion

If critical thinking is “a mix of intelligent behavior, informed decision making, and problem solving,”⁴⁶ then one can conclude that critical thinking is the core of teaching information literacy. They are both processes⁴⁷ synonymous with “intellectual aggressiveness.”⁴⁸ The fact that our discipline is being dominated by a conversation on the restructuring of learning outcomes in the new framework is evidence that we value critical thinking. No matter how information literacy is measured, how skills are grouped or re-grouped, or if knowledge execution is considered a stand-alone skill or holistic competency, it remains a process of problem solving. As teachers we need to modify those processes for the actual needs of the class or student and identify those dispositions that are relevant to the class and adapt the lesson plan accordingly. I end with a series of questions in hopes of

guiding us as individual teachers and as a profession towards a meaningful reflection on our roles as teachers in a higher education classroom for information literacy and on the role of critical thinking for student formation and aptitude. What misconceptions do we inadvertently box up into expectations, which then frustrate us when students are not performing at the right level? Are our own biases stalling our best intentions at the gate? What dispositions of critical thinking and of the framework are we focusing on? What is the normative level of expectation and achievement? How are we measuring those levels? How do we minimize negative (Golem) effects and maximize positive (Galatea) effects? Are we as teaching faculty further handicapping students by maintaining a curriculum that teaches to desired performance rather than actual performance? Is this even the right approach? Are there other interventions to eradicate teacher expectancy? Perhaps awareness alone is a good first step. These unarticulated expectations and unmeasured performance levels risk manifesting themselves into a disconnected and meaningless curriculum. I want to know if we can measure these expectancies effectively in order to develop a better curriculum for better thinkers. These ideas and questions are the start of a conversation with many people, my colleagues at my institution and with my instruction librarian colleagues across the country. I don't pretend to hold answers or present finite data. I had a question and I was curious so I pursued it in hopes of learning more, growing my understanding of the complex structure we call higher education.

Appendix A. Survey Questions

1. I am effective in teaching IL to students of any level.
 - A. Strongly agree
 - B. Agree
 - C. Disagree
 - D. Strongly Disagree
2. I have realistic expectations regarding incoming student IL proficiencies.
 - A. Strongly agree
 - B. Agree
 - C. Disagree
 - D. Strongly Disagree
3. All incoming freshmen should be capable of demonstrating a basic level of competency in IL.
 - A. Strongly agree
 - B. Agree
 - C. Disagree
 - D. Strongly Disagree
4. I believe it is important to have access to student academic achievement data (such as H.S. GPAs, SAT or ACT scores) in order to be an effective teacher.
 - A. Strongly agree
 - B. Agree
 - C. Disagree
 - D. Strongly Disagree
5. I am confident in my understanding of student learning.
 - A. Strongly agree
 - B. Agree
 - C. Disagree
 - D. Strongly Disagree
6. There are factors that contribute to or create disparities in student learning.
 - A. Strongly agree
 - B. Agree
 - C. Disagree
 - D. Strongly Disagree
7. In my teaching my practices, I am inclusive of different learning abilities and styles.
 - A. Strongly agree
 - B. Agree
 - C. Disagree
 - D. Strongly Disagree
8. Which of the following could impact student achievement? Mark all that apply
 - A. Race
 - B. Gender
 - C. Age
 - D. Income level
 - E. Confidence of student
 - F. Confidence of teacher
 - G. Parental support
 - H. Institutional support
 - I. Peer support
 - J. Innate intelligence
 - K. Ability of teacher
 - L. Other, please describe
 - M. None of the above
 - N. Other
9. A student has a certain amount of intelligence, and teachers really can't do much to change it.
 - A. Strongly agree
 - B. Agree
 - C. Disagree
 - D. Strongly Disagree
10. A person's intelligence is something that can't change very much.
 - A. Strongly agree
 - B. Agree
 - C. Disagree
 - D. Strongly Disagree

11. A person can learn new things, but can't really change their basic intelligence.
 - A. Strongly agree
 - B. Agree
 - C. Disagree
 - D. Strongly Disagree
12. I believe that professional development will have a significant impact on my teachings and interactions with students.
 - A. Strongly agree
 - B. Agree
 - C. Disagree
 - D. Strongly Disagree
13. Which of the following best describes your institution of higher learning?
 - A. Doctorate granting research university
 - B. Master's college or university
 - C. Baccalaureate college
 - D. Associate's college
 - E. Other special focus institution, including tribal institutions
 - F. not classified
 - G. not sure
14. Is your school:
 - A. private
 - B. public
 - C. for-profit
 - D. other
15. Have you ever taken any formal course on any aspect of teaching (classroom management, pedagogy, internships, etc...) at the graduate or upper-level undergraduate level?
 - A. Yes
 - B. No
16. Have you at any point in your academic or professional career taken formal coursework on any aspect of teaching?
 - A. Yes
 - B. No
17. Does your institutions make student data available?
 - A. Yes
 - B. No
 - C. I don't know
18. When did you complete your MLIS, MLS, or MA in LIS?
 - A. 1-5 years ago
 - B. 6-10 years ago
 - C. 11-15 years ago
 - D. 16 + years ago
 - E. N/A
19. Do you hold an addition graduate degree?
 - A. Yes
 - B. No
20. Is teaching IL your primary function at the library?
 - A. Yes
 - B. No, and it represents a small portion of my position.
 - C. No, but it is represents large percentage of my position.
21. Please indicate the number of years you have taught IL at the university/college level.
 - A. less than one year
 - B. 2 -5 years
 - C. 6-10 years
 - D. 11-15 years
 - E. 15 plus years
22. Do you have teaching experience beyond IL in academic libraries?
 - A. Yes
 - B. No
23. When you were in high school were you required to write a research paper?
 - A. Yes
 - B. No
 - C. Don't remember

24. Have you ever taken advantage of professional development activities related to teaching?

- A. Yes
- B. No

If yes, please list who provided the training and what the topic was.

25. With which of the following groups do you most identify?

- A. Gen Z
- B. Millennial
- C. Baby Boomer
- D. Silent Generation
- E. None/Other

26. Gender

- A. Male
- B. Female
- C. Transgender
- D. Prefer not to respond
- E. Other

27. With which of the following groups do you most identify?

- A. African American/Black
- B. Asian/Pacific Islander
- C. Hispanic/Latino
- D. Multiracial
- E. Native American/American Indian
- F. White
- G. Not Listed (please specify)

Notes

1. Arthur W. Combs, *Myths in Education: Beliefs that Hinder Progress and their Alternatives* (Boston, MA: Allyn and Bacon, 1979), 110.
2. Kathleen Langan, "Assessing Academic Research and Writing Experience of Freshmen in First-Year Writing Courses," in *Navigating Assessment and Curricula Changes in Higher Education*, ed. Marius Boboc, (Rotterdam, NL: Sense Publishers, forthcoming). For further information on assessment of information literacy in first year writing programs, please visit <http://www.ala.org/acrl/aboutacrl/directoryofleadership/sections/is/iswebsite/projpubs/tmcfybib>
3. Robert Rosenthal and Lenore Jackson, *Pygmalion in the Classroom: Teacher Expectation and Pupils' Intellectual Development* (New York: Holt, Rinehart and Winston, 1968), 11.
4. Rosenthal, "Interpersonal Expectancy Effects," 176.
5. Jere Brophy, "Research on the Self-Fulfilling Prophecy and Teacher Expectations," *Journal of Educational Psychology* 75, no. 5 (1983a), 631.
6. Robert Rosenthal, "Interpersonal Expectancy Effects: A 30-Year Perspective," *Current Directions in Psychological Science* 3, no. 6 (1994): vii, doi:10.1111/1467-8721.ep10770698.
7. Elisha Y. Babad, Jacinto Inbar, and Robert Rosenthal, "Pygmalion, Galatea, and the Golem: Investigations of Biased and Unbiased Teachers," *Journal of Educational Psychology* 74, no. 4 (1982): 459, doi: 10.1037/0022-0663.74.4.459. In Jewish folklore, the Golem is "an automaton like servant made of clay and given life by means of a charm." "Golem." In *The Columbia Encyclopedia*, (New York: Columbia University Press 2013). Galatea is a statue made by Pygmalion who then fell in love with it. Aphrodite brought it to life to answer Pygmalion's prayers. "Galatea" In *Encyclopedia of Greco-Roman Mythology*, (Santa Barbara, Calif.: ABC-CLIO, 1998).
8. Rosenthal, "Interpersonal Expectancy Effects." 176.
9. Brophy, "Research on the Self-Fulfilling Prophecy," 632; and Theodor Xenophon Barber, Albert Forgione, John F. Chaves, David S. Chaverly, John D. Mcpeake, and Barbara Bowen, "5 Attempts to Replicate the Experimenter Bias Effect," *Journal of Consulting and Clinical Psychology* (1969): 1-6, doi: 10.1037/h0027229.
10. Barbara J. Kiviat, "The Social Side of Schooling" *Johns Hopkins Magazine* (2000), <http://pages.jh.edu/~jhumag/0400web/18.html>.
11. Andy Hargreaves, "The emotional practice of teaching," *Teaching and teacher education* 14, no. 8 (1998): 835, doi:10.1016/S0742-051X(98)00025-0.
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13. Pauline R. Clance and Suzanne A. Imes. "The Imposter Phenomenon in High Achieving Women: Dynamics and Therapeutic Intervention," *Psychotherapy: Theory, Research & Practice* 15, no. 3 (1978): 241, doi:10.1037/h0086006.
14. Thomas Gilovich, Victoria Husted Medvec, and Kenneth Savitsky. "The Spotlight Effect in Social Judgment: An Egocentric Bias in Estimates of the Salience of One's Own Actions and Appearance," *Journal of Personality and Social Psychology* 78, no. 2 (2000): 211. doi: /10.1037/0022-3514.78.2.211.
15. "Stereotype Threat." In *The Penguin Dictionary of Psychology*, (London: Penguin, 2009); also see Claude M. Steele, "A Threat in the Air: How Stereotypes Shape Intellectual Identity and Performance," *American Psychologist* 52, no. 6 (1997): 613-629. <http://www.ncbi.nlm.nih.gov/pubmed/9174398>.
16. See Patricia F. Katopol, "Management 2.0: Avoiding the Reference Desk: Stereotype Threat," *Library Leadership & Management (Online)* 28, no. 3 (2014): 1G-4G. <http://search.proquest.com/docview/1532731745?accountid=15099>; and Janice Simmons-Welburn and William C. Welburn. "Cultivating Partnerships/Realizing Diversity," *Journal of Li-*

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17. Bruce E Blaine, *Understanding the Psychology of Diversity* (London, GBR: Sage Publications Ltd, 2007), 185.
 18. Clark McKown and Rhona S. Weinstein, "Teacher Expectations, Classroom Context, and the Achievement Gap," *Journal of School Psychology* 46, no. 3 (2008): 235-261. doi: 10.1016/j.jsp.2007.05.001
 19. Babad, *The Social Psychology of the Classroom*. London: Routledge (2009), 83.
 20. Babad, et al., "Pygmatation, Galatea, and the Golem," 472.
 21. Ibid, 464.
 22. Babad, *The Social Psychology of the Classroom*, 82.
 23. Monica J. Harris and Robert Rosenthal, "Four Factors in the Mediation of Teacher Expectancy Effects," in *The Social Psychology of Education: Current Research and Theory* ed. Robert S. Feldman (Cambridge, UK: Cambridge University Press, 1990), 91-114.
 24. Babad, *The Social Psychology of the Classroom*, 158-159.
 25. Robert F. Goheen, *The Human Nature of a University* (Princeton, NJ: Princeton University Press, 1969), 88.
 26. I wonder if the term "metaliteracy" isn't a modern adaptation of the concept of "critical thinking. The prefix *meta*-seems to be in vogue of late, used to indicate a certain higher order of problem solving and reflective thinking and adaptive knowledge execution that in my mind describes the recursive nature of critical thinking.
 27. Richard Arum and Josipa Roksa, *Academically Adrift: Limited Learning on College Campuses* (Chicago: University of Chicago Press, 2011), 3.
 28. Goheen, *Human Nature of a University*, 42.
 29. Ibid, 43.
 30. Joan Wallach Scott, "Testimony by Professor Joan Wallach Scott Before the Pennsylvania General Assembly's House Select Committee on Student Academic Freedom," 2005, <http://www.aaup.org/sites/default/files/files/Academic%20Bill%20of%20Rights/ScottTestimony.pdf>
 31. Mark D. Halx, and L. Earle Reybold, "A Pedagogy of Force: Faculty Perspectives of Critical Thinking Capacity in Undergraduate Students," *The Journal of General Education* 54, no. 4 (2006): 301, <http://eric.ed.gov/?id=EJ797237>.
 32. Gohen, *The Human Nature of a University*, 80.
 33. Arum and Roksa, *Academically Adrift*, 126.
 34. Ibid, 3-4.
 35. Ibid, 21-34. Excerpt taken from the 1997 NCES Report.
 36. Ibid, 34. Excerpt taken from Rosenbaum, *Beyond College*, 59-62.
 37. Stuart Rojstaczer, *Gone for Good Tales of University Life After the Golden Age* (Oxford: Oxford University Press, 1999), 13-27.
 38. Hanna Holborn Gray, *Searching for Utopia: Universities and their Histories*, Vol. 2., (Berkeley: University of California Press 2012): 86.
 39. Combs, *Myths in Education*, 179.
 40. John Hutchinson MacCallum Scott, *Dons and Students: British Universities Today* (London: Plume Press, 1973), 105.
 41. In reviewing the extensive corpus of literature dedicated to the study of information literacy, the majority of research has focused on measuring and assessing student performance rather than teacher performance. There is far less literature that assesses the performance of the instructor. A recent study by Heidi Julien and Shelagh K. Genuis report the findings of a national survey on teaching librarians. This summary reports that librarians struggle with their professional identity as a teacher. Heidi Julien and Shelagh K. Genuis "Librarians' Experiences of the Teaching Role: A National Survey of Librarians," *Library & Information Science Research* 33, no. 2 (2011): 103-111, doi: 10.1016/j.lisr.2010.09.005.
 42. Tara Brabazon, *The University of Google: Education in the (Post) Information Age*, (Ashgate Publishing, Ltd., 2012): 21.
 43. Goheen, *The Human Nature of a University*, 89.
 44. Jennifer L. Frentress, "Assessing the Impact of Teacher Beliefs on Student Achievement." Ed.D., Dissertation Lewis and Clark College, 2014.
 45. When it came to demographics and more specifically age, I opted to solicit responses about generational identity. I felt that, with the current research of learning styles and attitude difference highlighting generational differences, it would be more appropriate to look how someone identifies him or herself. This did cause a little confusion but it does offer some insight into the traits of people working in our discipline. For more information on the characteristics of different generations, see Dianna G. Oblinger and James L. Oblinger, "Educating the Net Generation," (2005): 29, <https://net.educause.edu/ir/library/pdf/pub7101.pdf>
 46. Combs, *Myths in Education*, 79.
 47. Sharon Bailin, Roland Case, Jerrold R. Coombs, and Leroi B. Daniels, "Common Misconceptions of Critical Thinking," *Journal of Curriculum Studies* 31, no. 3 (1999): 274.
 48. Halx and Reybold, "A Pedagogy of Force," 306.

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