

November 2019

Students' Perceptions of Course Syllabi: The Role of Syllabi in Motivating Students

Lindsay B. Wheeler
University of Virginia, lsb4u@virginia.edu

Michael Palmer
University of Virginia, mp6h@virginia.edu

Itiya Aneece
US Geological Survey, pb6ge@virginia.edu

Follow this and additional works at: <https://digitalcommons.georgiasouthern.edu/ij-sotl>

Recommended Citation

Wheeler, Lindsay B.; Palmer, Michael; and Aneece, Itiya (2019) "Students' Perceptions of Course Syllabi: The Role of Syllabi in Motivating Students," *International Journal for the Scholarship of Teaching and Learning*: Vol. 13: No. 3, Article 7.

Available at: <https://doi.org/10.20429/ijstl.2019.130307>

Students' Perceptions of Course Syllabi: The Role of Syllabi in Motivating Students

Abstract

In this mixed methods study, researchers explored students' perceptions of different types of syllabi, the course, and the instructor articulated through the syllabi. Students were randomly assigned to read one of two US History syllabi: a content-focused syllabus (CFS), characterized as a traditional, content-focused, policy-laden syllabus; or a learning-focused syllabus (LFS), characterized by strong learning objectives, authentic assessments, and a positive, motivating tone. Results show that LFS participants (n=61) had significantly more positive perceptions of the document, the course, and the instructor described by the document than CFS participants (n=66). LFS participants found, for example, more of the syllabus components to be useful, anticipated more student involvement in class, expected to learn more useful concepts and skills, and anticipated that the instructor would help them be successful. Although additional research is needed to determine generalizability of these results, we conclude that instructors have little to lose and much to gain by creating a learning-focused syllabus.

Keywords

Learning-Focused Syllabus, Content-Focused Syllabus, Student Perceptions, Expectancy-Value Theory

Creative Commons License



This work is licensed under a [Creative Commons Attribution-Noncommercial-No Derivative Works 4.0 License](https://creativecommons.org/licenses/by-nc-nd/4.0/).

Students' Perceptions of Course Syllabi: The Role of Syllabi in Motivating Students

Lindsay B. Wheeler,¹ Michael Palmer,¹ and Itiya Aneece²

¹ University of Virginia

² US Geological Survey

Received 18 October 2018; Accepted 16 February 2019

In this mixed methods study, researchers explored students' perceptions of different types of syllabi, the course, and the instructor articulated through the syllabi. Students were randomly assigned to read one of two US History syllabi: a content-focused syllabus (CFS), characterized as a traditional, content-focused, policy-laden syllabus; or a learning-focused syllabus (LFS), characterized by strong learning objectives, authentic assessments, and a positive, motivating tone. Results show that LFS participants (n=61) had significantly more positive perceptions of the document, the course, and the instructor described by the document than CFS participants (n=66). LFS participants found, for example, more of the syllabus components to be useful, anticipated more student involvement in class, expected to learn more useful concepts and skills, and anticipated that the instructor would help them be successful. Although additional research is needed to determine generalizability of these results, we conclude that instructors have little to lose and much to gain by creating a learning-focused syllabus.

The syllabus is a physical artifact outlining key structural elements of a course, including, for example, general course information, instructor information, policies, and schedule. The syllabus has traditionally served contractual, record-keeping, and communication functions (Fink, 2012; Neaderhiser, 2016), called a *content-focused syllabus* in the present study. However, some have argued that its primary function should be that of a learning tool (Harrington, & Thomas, 2018; O'Brien, Millis, & Cohen, 2008). When framed in this way, the syllabus looks and reads much differently from traditional ones. *Learning-focused syllabi* (Canada, 2013; Palmer, Streifer, & Bach, 2014), developed from principles of backward-integrated course design (Wiggins & McTighe, 2005), educative assessment (Huba & Freed, 2000; Wiggins, 1998), scientific principles of learning (Brown, Roediger, & McDaniel, 2014), and student motivation (Schunk, Pintrich, & Meece, 2007) are characterized by:

- an engaging, question-driven course description;
- long-ranging, multi-faceted learning goals;
- clear, measurable learning objectives;
- robust assessment and activity descriptions;
- a detailed course schedule framed in what author Ken Bain (2004, p. 50) calls "beautiful questions;"
- an inviting, approachable, and motivating tone; and
- a focus on student success.

Given that learning-focused syllabi are firmly grounded in evidence-based pedagogical practices and principles of student motivation theories, one might expect students to appreciate and prefer learning-focused syllabi over more traditional, content- and policy-focused ones—and to interact with them differently. But, does the document matter, in terms of what students attend to in syllabi, their perceptions of the course described by the document, and the instructor associated with the course?

A few published studies have touched on pieces of this question for traditional, content-focused syllabi. For example, Becker & Calhoun (1999), Garavalia, Hummel, Wiley, & Huit (1999), and Doolittle & Siudzinski (2010) found that when students read syllabi they primarily focus their attention on elements relating to performance (e.g. grading, policies, assignments, and due dates). Parkes, Fix, & Harris (2003) found through analysis of their institutional syllabi that instructors tend to exclude assessment infor-

mation from syllabi, and the authors claimed this exclusion is to the detriment of student learning.

In one of a several studies most directly addressing the question, "Does the document matter?," Harnish & Bridges (2011) provide evidence that a "syllabus written in a friendly, rather than unfriendly, tone evoked perceptions of the instructor being more warm, more approachable, and more motivated to teach the course." Along the same lines, Baecker (1998) examined how use of certain pronouns (e.g., I vs you) creates unproductive imbalances of power between instructor and student, again, potentially negatively impacting student learning. Along different lines of inquiry, Stevens and Gibson (2017) found that syllabi can foster either a mastery- or performance-orientation toward learning, depending on how elements such as learning objectives and assignment descriptions are framed. Saville and colleagues (2010) compared students' perceptions of teaching effectiveness by giving students terse and detailed versions of a hypothetical syllabus. They found that students perceive an instructor to possess more "master teaching" skills when provided the more detailed syllabus, and these students were also more likely to recommend the course or take another course from that instructor. Finally, Ludy et al. (2016) found that students express increased interest in a course and the instructor when given a graphic-rich engaging syllabus compared to a text-rich contractual syllabus.

While the literature mentioned above looks at isolated pieces of the puzzle, the current study adds significantly to this literature by systematically probing students' perceptions of different types of syllabi, which were engineered using a valid rubric; their perceptions of the courses described by the syllabi; and their perceptions of the instructors associated with the courses. To our knowledge, this is the first study to take a more comprehensive approach in examining the extent to which syllabi affect student perceptions.

THEORETICAL FRAMEWORK

The expectancy-value theory (EVT) of achievement motivation (Wigfield & Eccles, 2000) guided the development and implementation of this study. This theory posits that individuals' choices, persistence, and performance are a factor of their beliefs about how well they will do on an activity (i.e., expectancy) and the value they place on it (i.e., value). Students' beliefs about how well

they might perform depend on previous experiences, self-concept of ability, drive for competency, skill-matching to other related activities, their confidence, and the support, encouragement, and feedback the instructor offers. Students might derive value from the importance or meaningfulness of an activity, their personal interest in or enjoyment of it, or its usefulness for their present or future plans.

Given that syllabi articulate key aspects of the learning environments, even if only as an approximation, it is reasonable to assume the document is able to affect students' motivation. For example, students might begin to form beliefs about whether they expect to succeed in a particular course based on the language and tone the instructor uses in the syllabus, the instructor's availability, the grading scheme, opportunities for feedback and extra help, and listed policies. Students might also begin to ascribe real or perceived value to the learning experience based on the course description, learning objectives, required reading materials, assignments, and course schedule. Syllabi that support students' expectancy and help them discover value in what they are learning should increase motivation. Those that don't attend to these constructs, or only marginally tend to them, should decrease motivation. While some research has explored student interest based on the syllabus document (e.g., Ludy et al., 2016), no research to our knowledge has explored student motivation within the context of syllabus perceptions.

PURPOSE

Guided by an EVT motivation framework, we developed learning- and content-focused syllabi to systematically explore the following questions:

- 1. How, if at all, do students' perceptions of the characteristics of content- and learning-focused syllabi differ?**
- 2. How, if at all, do students' perceptions of the courses described by content- and learning-focused syllabi differ?**
- 3. How, if at all, do students' perceptions of the instructors associated with the courses described by content- and learning-focused syllabi differ?**

METHODS

In this IRB-approved, quasi-experimental mixed methods study, participants were randomly assigned to read one of two constructed syllabi—content- or learning-focused—and asked to describe their typical approach to learning, and provide their

perceptions about the syllabus, the instructor, and the course described by the one syllabus they read. We used a convergent parallel mixed methods survey approach, where the quantitative and qualitative data are collected simultaneously, analyzed separately, and reported together in the results (Creswell, 2014). Our emphasis was on the quantitative data, with qualitative data providing additional context. We briefly describe the details of participants, data sources, and data analysis in the following section. Additional information about our methods can be found in Appendix A.

Participants and Data Collection Method

A total of 1,199 freshmen and sophomore students at a medium-sized, research-intensive public university in the mid-Atlantic region of the United States were randomly selected to voluntarily participate in this IRB-approved study. The students were contacted via email during a two-week window in the spring 2014 semester. A total of 127 first- and second-year undergraduate students volunteered and consented to participate.¹

Participants were randomly assigned to one of two experimental groups: a content-focused syllabus group (CFS; n=66) or a learning-focused syllabus group (LFS; n=61). Demographics of the students in each group are shown in Table 1. Similarities between the LFS and CFS groups confirm the random assignment and allow for comparisons between them.

Participants in both groups completed a survey that included three components: pre-survey, syllabus, and post-survey. Completing the survey took participants approximately 30 minutes. In the pre-survey, participants answered a series of questions related to how they typically study for their courses, called the revised two-factor study process questionnaire (R-SPQ-2F; Biggs, Kember, & Leung, 2001). This served as another measure to ensure equivalency across groups. The CFS group then received a content-focused syllabus for an introductory US History course (Appendix B). The LFS group received a learning-focused version of the same History course (Appendix C). After reading their assigned syllabus, participants completed a post-survey about their perceptions of the document, the course described by the syllabus, and the instructor associated with the syllabus.

Instrumentation

The syllabi were developed by Researcher A (Palmer), whose expertise is in curriculum development, and a history professor, who has experience teaching the particular US History course described by the syllabi. The development was guided by using a valid and reliable syllabus rubric designed to assess the degree to which a syllabus achieves a learning orientation (Palmer, Bach, & Streifer, 2014). Using the full range of components, we produced a content-focused syllabus that scored below 5 on the rubric's

Table 1. Participant Demographic Information

Group	Gender (%)		Ethnicity (%)						Year		Residency (%)		Alien Status (%)		GPA (SD)	SAT (SD)
	Male	Female	Caucasian	African-American	Asian	Hispanic	Multi	Not reported	1st	2nd	In	Out	Native	Non-native		
All (n=127)	50 (39.4)	77 (60.6)	71 (55.9)	7 (5.5)	21 (16.5)	6 (4.7)	7 (5.5)	15 (11.8)	77 (60.6)	50 (39.4)	91 (71.7)	36 (28.3)	121 (95.3)	6 (4.7)	3.35 (.48)	1376 (136)
CFS (n=66)	24 (36.4)	42 (63.6)	32 (48.5)	6 (9.1)	12 (18.2)	3 (4.5)	5 (7.6)	8 (12.1)	37 (56.1)	29 (43.9)	42 (63.6)	24 (36.4)	59 (89.4)	7 (10.6)	3.37 (0.45)	1360++ (144)
LFS (n=61)	26 (42.6)	35 (57.4)	39 (63.9)	1 (1.6)	9 (14.8)	3 (4.9)	2 (3.3)	7 (11.5)	40 (65.6)	21 (34.4)	48 (78.7)	13 (21.3)	57 (93.4)	4 (6.6)	3.33 (0.52)	1390+ (128)

Note. No significant differences observed between CFS and LFS groups. + n=60. ++ n=53 due to missing SAT scores in the data set.

46-point scale and a learning-focused syllabus that scored above 40.

The post-survey contained 80 Likert-style questions and 7 open-ended questions (Appendix D). The majority of the questions developed for this study focused on participants' perceptions of the document, course, and instructor. The two syllabi and the post-survey were reviewed by a panel of experts to provide face and content validity (Haynes, Richard & Kubany, 1995; Newman & McNeil, 1998). We incorporated panel feedback before survey administration.

DATA ANALYSIS

We analyzed the Likert survey questions using descriptive and inferential statistics and analyzed the open-ended survey questions using a constant comparative approach (Glaser, 1965). We triangulated the qualitative data with the quantitative data to increase the trustworthiness, or credibility, of the results (Golafshani, 2003).

Quantitative

We used SPSS software to perform the quantitative data analysis. Mean values were used to describe participant responses to each Likert question for each syllabus group—LFS and CFS. We also grouped participants' perceptions into the three distinct constructs: document perceptions, course perceptions, and instructor perceptions (see Appendix A for details). We ran Levine's test to identify whether the homogeneity of variance assumption for parametric testing was met for each question and each construct. Data that did not violate Levine's test were analyzed using a one-way analysis of variance (ANOVA) to identify differences between LFS and CFS groups' perceptions and with correlations to identify relationships between variables. Those questions that violated Levine's test were analyzed using a Kruskal-Wallis non-parametric test to identify differences between LFS and CFS groups.

Qualitative

We analyzed the qualitative data using a constant comparative approach, where the data are coded and compared, and the codes are modified and integrated to create the final coding scheme representing the data (Glaser, 1965). In this study, Researcher B (Wheeler) and Researcher C (Aneece) separately analyzed the data to inductively develop a coding scheme for the data. They first individually read participants' responses to open-ended survey questions holistically and then re-read responses to identify preliminary codes. A third reading of participant responses helped Researchers B and C collapse and expand the codes within their individual coding schemes. After both researchers inductively coded the qualitative data separately, they discussed their coding. The coding categories created by both researchers overlapped on nearly all categories for each question. Upon discussion of their coding for each question, the two researchers developed a per question comprehensive coding scheme that encompassed both sets of codes.

The coding schemes were also used to inform the organization of the individual Likert questions into larger categories. For example, we organized the Likert questions related to document perceptions into three categories from the qualitative coding scheme: document structure, document tone, and interest in reading the document. When appropriate, frequencies of qualita-

tive responses were used to illuminate differences in these data and support the quantitative results. For example, participants' perceptions of the course structure were coded by Researcher B and C using three categories: lecture only (i.e., no discussion of student engagement/interaction), lecture with discussion, and discussion-based (i.e., no discussion of lecture). Frequencies of responses were calculated for each category (see coding examples of deductive coding in Appendix A). The integration of qualitative and quantitative data justifies the use of a mixed methods approach in this study.

RESULTS & DISCUSSION

We discuss the result of our study in three main blocks: participants' perceptions of the document, their perceptions of the course described by the document, and their perceptions of the instructor associated with the course. Our convention is to describe the quantitative data first and interleave the supporting qualitative data to provide context. From an EVT perspective, we also include qualitative data that demonstrate participants' motivation for learning in the course.

Perceptions of the Document

Participants were asked whether they found various components of the syllabus helpful (e.g., schedule, instructor information) and whether they would revisit these components throughout the semester. Perceptions of the document were further refined to the structure/organization of the document, tone of the document, and interest in reading the document.

Document components

Overall LFS participants found more syllabus components helpful and would revisit them more often compared to CFS participants (Figure 1). The most helpful component *and* the component both LFS and CFS participants would most likely revisit throughout the semester was the schedule. Open-ended responses supported this finding, with statements such as, "The schedule is the most helpful part" (3ACG65, LFS), and "The schedule is very helpful" (GR77DW, CFS). Similarly, the course description was a document component both LFS and CFS agreed was helpful; however, neither group would revisit the course description throughout the semester.

Helpful document components. Differences existed in perceptions of how helpful some of the other components of the syllabus were for participants. LFS participants perceived the instructor information, course materials, learning objectives, assessment activities, and tips for success significantly more helpful than CFS participants. These quantitative differences were reflected in participants' qualitative responses. When asked about their initial perceptions of the document, one participant in the CFS group stated, "I really did not pay much attention to [the syllabus] aside from noticing what kind of information I can access, like when exams will be and what readings are due on which days" (2ZU4C6, CFS). This participant did not value any other components in the syllabus beyond the schedule, a sentiment shared by many CFS participants. On the other hand, qualitative data revealed that LFS participants found multiple components of the syllabus helpful. One participant stated, "[The syllabus] appears to be well thought-out and very reliable for students who may be confused on what their future assignments are" (8RJV84, LFS). Another LFS participant valued the tips for success, responding,

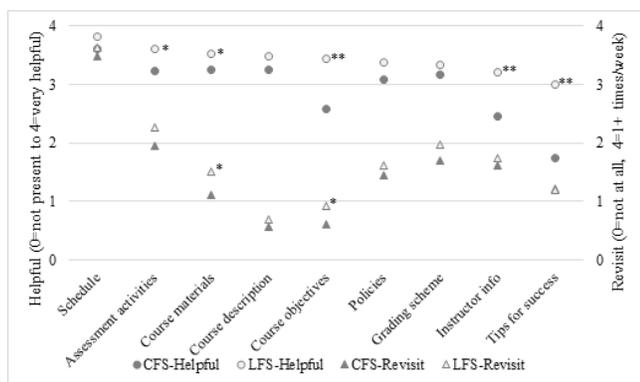


Figure 1. Differences in LFS and CFS perceptions of document components (means and standard deviations for each data point can be found in Appendix E). * significant differences between LFS and CFS, $p < .05$. ** significant difference between LFS and CFS, $p < .01$.

"I thought the professor did a great job by stating up front the expectations and all that would make you a successful student in their class" (NVN5GV, LFS). Thus, more of the components of the learning-focused syllabus helped participants get a sense of the course compared to participants who read the content-focused syllabus.

Revisiting document components. After the schedule, assessment and grading components were what both LFS and CFS participants perceived they would revisit most, often every few weeks. Both LFS and CFS participants would revisit the course description least frequently, on average once or none at all. When comparing groups, LFS participants indicated they would revisit the course materials and the course learning objectives significantly more often than participants in the content-focused group. When asked what components would encourage frequent use of the syllabus throughout the semester, the schedule predominated both LFS and CFS responses. Some participants in both groups also indicated more detail would encourage more use of the syllabus, such as, "Better layout of what to expect throughout the semester, guidelines/rubrics for paper" (RJAYWB, CFS), and "Perhaps a more in-depth section of summaries of topics" (FG939W, LFS). Further, CFS participants more often discussed tips for success as a way to encourage more use of the syllabus, stating, for example, they would appreciate "Tips for each unit" (4QSSTD, CFS), and "Writing tips" (G5CRTC, CFS). These

data suggest that while the schedule is important, participants suggested that transparency and support for their success were useful syllabus components.

These findings about students' attention to particular syllabus components adds three important nuances to the existing literature on the topic (Garavalia et al., 1999; Doolittle & Siudzinski, 2010). First, both LFS and CFS groups found the syllabus schedule the most helpful component and the component they would revisit the most. However, the schedules described in the two syllabi varied significantly. The LFS schedule included "beautiful questions" (Bain, 2004, p. 50) to be explored and information about preparing for class, while the CFS schedule listed topics, readings, and due dates. Second, LFS participants' perceptions of the helpfulness of the course objectives and tips for success are consistent with the emphasis the learning-focused syllabus places on goals and learning objectives, assessment of learning, and overall student success. Further, it appears CFS participants may desire more detailed components in the syllabus, including tips for success, which were absent from their syllabus. So it is noteworthy that the intention of the syllabus as supporting student success translates to LFS participants' perceptions and is perceived as valuable by CFS participants. Third, the two components most characteristic of the content-focused syllabus are grades and policies, which were intentionally under-emphasized in the learning-focused syllabus. Despite the differences we purposefully created in the two syllabi, students' attention to them did not differ nor did their reported need to revisit these components. These findings are consistent with prior research showing that students typically attend most to policy-related syllabus components (Garavalia et al., 1999; Doolittle & Siudzinski, 2010) but further suggests that students infrequently revisit these policies throughout the semester. Thus, de-emphasizing them in the syllabus, by placing policies near the end of the document for example, likely does not matter to students.

Document perceptions

Overall, the LFS group had significantly more positive perceptions of the syllabus as a document than the CFS group (Table 2).

Structure of the document

Each group perceived their assigned syllabus to be highly organized and having clear expectations. Open-ended responses

Table 2. Participants' Perceptions of Content- and Learning-focused Syllabi

Construct	Prompt	CFS Group n=66 (SD)	LFS Group n=61 (SD)
Structure of the document	The syllabus is well organized.	5.36 (.78)	5.18 (.74)
	The syllabus clearly defines course expectations.	5.03 (.93)	5.05 (.69)
	There is not enough detail in the syllabus to understand the course expectations.	2.83 (1.13)	2.13 (1.06)**
	The syllabus is easily readable.*	5.24 (.88)	4.34 (1.20)**
	The syllabus is difficult to follow.*	1.89 (.91)	2.65 (1.23)**
	The focus of the syllabus is on learning.*	4.06 (1.25)	5.23 (.67)**
	The focus of the syllabus is on content and/or policies.	4.86 (1.01)	4.31 (1.15)**
Tone of the document	I will likely need to continue to refer to the syllabus throughout the course.*	4.56 (1.34)	4.89 (.93)
	The tone of the syllabus is positive, respectful, and inviting.*	4.17 (1.24)	5.05 (.90)**
	The syllabus projects a sense that the instructor cares about me and my learning.*	3.65 (1.20)	5.13 (.87)**
	The syllabus is condescending to my intelligence.*	2.89 (1.44)	2.46 (1.06)
Interest in reading the document	The syllabus communicates high expectations.*	4.38 (1.20)	4.89 (.86)*
	The syllabus projects confidence that students can meet expectations through hard work.*	3.98 (1.18)	4.93 (.91)**
	The syllabus is boring.	3.70 (1.18)	3.52 (1.15)
	The syllabus is interesting.	3.30 (1.16)	3.85 (1.00)**

Note. Constructs developed from inductive coding of qualitative data. Likert scale from 1=Strongly disagree to 6=Strongly agree. +violates Levene's Homogeneity of variance ($p < .05$), Kruskal-Wallis test; *significant $p < .05$; **significant $p < .01$.

supported these quantitative data as participants in both groups made comments such as, “The syllabus seems to clearly lay out expectations and goals” (Z8W228, CFS), and the syllabus was “very organized and informative” (WM2MGN, LFS).

CFS participants perceived the syllabus as not having enough detail significantly more than participants in the LFS group. Further, LFS participants perceived the syllabus as significantly harder to read and more difficult to follow than CFS participants. In other words, participants who received the learning-focused syllabus found the document significantly more thorough but also more difficult to follow than participants who received the more terse content-focused syllabus.

The qualitative data suggested participants’ perceptions on the readability of the learning-focused syllabus may be related to two factors: 1) the length of the document, and 2) students’ expectations about the purpose of syllabi. Participants in the LFS group made statements such as, “This syllabus seemed rather long, yet thorough in order to make [clear] all class assignments and policies” (A5P922, LFS) and, “very long and detailed” (YBTPIX, LFS). While most LFS participants acknowledged and appreciated the length of the syllabus, a few did not, making statements such as, “The syllabus is a *functional* document that doesn’t need frilly writing. The ‘what you’ll learn along the way’ part was unnecessary. Every professor has those aims” (FFKPKR, LFS; emphasis added). The quote suggests that at least some LFS participants had clear beliefs about the functional purpose of syllabi and felt that some of the additional information provided was either unnecessary or unhelpful, a reaction that may be partly due to the students’ unfamiliarity with learning-focused syllabi. Participants who received the content-focused syllabus, on the other hand, commonly stated, “It looks like a typical syllabus that I have seen before” (7D7F36, LFS). Thus, challenges with reading and focusing on the learning-focused syllabus, especially given its length, may contribute to the negative reactions.

Tone of the document

LFS participants had significantly more positive perceptions of the tone of the document than the CFS group (Table 2). The largest significant difference related to participants’ perceptions of how tone translated to how caring the instructor was; LFS participants felt the instructor was significantly more caring than CFS participants. The qualitative data support these quantitative differences in LFS and CFS participant perceptions. Representative responses from the LFS group related to the tone included, “I thought the tone sounded very personable and friendly” (45VURK, LFS) and, “I liked the initial section talking about the [course description]. It was a good way for me to see the general vibe of the course and find out what it would be like” (W94XEA, LFS). Conversely, CFS participants’ initial perceptions of syllabus tone were more negative. One participant stated, “The tone of the syllabus makes the professor seem cold, uncompromising, and unfriendly...I would immediately think the professor is a hard ass. I’d expect a great number of students to drop the class after receiving the syllabus” (SB6Q8F, CFS).

Interest in reading the document

LFS participants found the syllabus significantly more interesting than the syllabus read by CFS participants; however, no differences existed in their perceptions of the syllabus as being boring. The qualitative data provide explanations for these similarities and differences between groups. Participants’ differential inter-

est in the document may be related to the aforementioned tone, while similarities in the level of boring-ness may be for different reasons. The LFS group appeared to find the syllabus boring due to the length. One LFS participant stated the syllabus was, “Way too wordy. It was hard to concentrate on it” (5JHZJX, LFS) and, “I think that the syllabus was a bit too long, as I started losing interest about halfway through” (W94XEA, LFS). On the other hand, the CFS group’s lack of interest in the document seemed to stem from the predictable, familiar format of the content-focused syllabus. For example, CFS participants’ indicated, “I don’t have strong feelings about it. The formatting is clean and boring, no real issues. Doesn’t seem interesting a course though [sic]” (4QSSTD, CFS) and, “Not really much emotion. Standard syllabus given at [university]” (DUPQMU, CFS).

Interestingly, the difference in the perceptions of interest (or lack thereof) for each group are quite distinct. LFS participants found the syllabus more interesting and less boring, with a positive mean difference between the scores (.33), whereas CFS participants found the syllabus more boring and less interesting, with a negative mean difference between the scores (-.40). Thus, despite the perceived length of the learning-focused syllabus, participants still found the syllabus interesting. These results add to the literature on the importance of syllabus tone (Harnish & Bridges, 2011) and suggest that the language and description provided may counterbalance the negative impact of length. Further, our study adds to the literature on syllabus length (Saville et al., 2010) to provide additional evidence that detail and transparency in syllabi may have benefits for students.

Perceptions of the Course

Participants’ perceptions of the course represented by the syllabus are organized by their perceptions of the in-class activities and around perceived learning in the course, interest in the course, and workload in the course.

In-class activities

LFS participants had significantly different expectations of the in-class activities based on the syllabus they read compared to CFS participants (Table 3). Specifically, LFS participants expected there would be significantly less time spent on lecture in the course represented by the learning-focused syllabus and significantly more in-class time spent on discussion, group work, debates, presentations, and projects. LFS participants commented on the variety of in-class activities that they expected to experience in the course. For example, “I would expect some form of lecture about the material, then some sort of engaging activity, such as a group analysis of a historical document or a class debate” (45VURK, LFS) and, “Probably not a typical lecture [course]—discussions, debates, small group work, etc.” (AZKJ8C, LFS). Conversely, representative comments from CFS participants about class activities included, “Lecture, lecture and more lecture” (J39UJK, CFS) and, “I imagine [class] would be some sort of powerpoint lecture” (SG3JXH, CFS).

When counting the frequencies in the open-ended responses of the types of activities LFS and CFS participants would expect to engage in during class, the differences were even more pronounced (Figure 2). Nearly three-quarters of LFS participants (n=44, 72%) expected the course to incorporate some sort of discussion component. Of those 44 participants, 25 (57%) did not mention lecture at all and suggested there would be constant discussion and engagement with students during class time. Only 8% of LFS participants perceived the course represented by the

Table 3. Students' Perceptions of In-class Activities

Class Activities	CFS, n=66 (SD)	LFS, n=61 (SD)
Lecture*	3.85 (.64)	3.26 (.84)**
Instructor-led discussion*	1.95 (1.22)	3.10 (.60)**
Student-led discussion	.80 (1.08)	2.52 (.85)**
Group work	.63 (.88)	2.39 (.82)**
Debate	.64 (.93)	2.18 (1.04)**
Student presentations	.52 (.94)	1.64 (.86)**
Working on course projects	.52 (.99)	1.31 (.87)**

Note. Likert scale from 0=not at all, 1=1-2times/semester, 2=every few weeks, 3=some each class, 4=most of every class. *violates Levene's Homogeneity of variance ($p<.05$), Kruskal-Wallis test. **significant $p<.01$.

learning-focused syllabus would rely mostly on lecture. Conversely, over three quarters of CFS participants (n=51, 77%) indicated the course represented by the content-focused syllabus would rely solely on lecture. Less than one-fifth (n=12, 18%) expected there would be any type of discussion component to the course.

Given the emphasis the learning-focused syllabus places on group work, discussions, and projects, as well as a lack of evidence of any type of lecture component to the course, it is curious that a small number (8%) of LFS participants still perceived the course to be mostly lecture. This may have more to do with a perception that undergraduate courses are predominately lecture, a perception recently confirmed in a study of undergraduate STEM courses (Stains et al., 2018), rather than participants' understanding of the course from the syllabus. In other words, the history course as a lecture course may be such an ingrained perception that some students may not be able to recognize how a course, even a learning-focused course as described in the syllabus, could be anything but lecture.

Course perceptions

Overall, LFS participants had significantly more positive perceptions of the course than their CFS counterparts (Table 4).

Learning in the course

LFS participants expected to learn significantly more concepts, study skills, and how experts approach a topic compared to CFS participants. While we did not include any qualitative questions directly probing participants' perceived learning in the courses described by the syllabi, some participants' responses to other questions suggested interesting differences that complement the quantitative results. For example, a number of LFS participants mentioned how active they would need to be in the class. One student commented, "I would expect the professor to use all of the allotted time each class and try to make the students participate every day" (R8GBQ7, LFS). On the other hand, CFS participants' open-ended responses regarding course structure emphasized the passive role students would take in the course. One participant felt they would likely just be "sitting there while

the teacher lectures, nothing else" (C432XY, CFS). Another suggested that the course would be "a lecture on history where the professor will identify key moments and people and tell the story as it happened" (2YN7VJ, CFS). While not directly probed, it may be that students who expect to do more than memorize facts may also understand this deeper learning requires more engagement.

Interest in the course

Based on the quantitative data, both groups held similar perceptions of their general interest in the course, and this was reflected in their qualitative responses. For example, when asked about their course perceptions, participants stated, "It seems like an interesting course, and the instructor seems approachable" (DJUGPX, LFS) and, "It seems like a manageable and interesting course" (52KJC8, CFS). The lack of differences in course interest may stem from the type of course (i.e., history) and not the syllabus. This was supported by some participants who claimed they were "not interested in the subject matter" (JQ932Z, LFS).

There exist differences, however, in mean values within each group for the statements 'this course would be interesting to take' and 'this course is of personal interest to me.' LFS participants' negative mean difference was much larger (-1.03) compared to CFS participants (-0.35), meaning LFS participants found the course more interesting though not personally interesting.

Further, LFS participants perceived that the course would be more practically important than CFS participants. For example, one LFS participant wrote, "Professor shows excitement about the course and shows that students will be able to take what they learn about history and apply it to real life" (USXF7R, LFS), and:

The syllabus is extremely comprehensive but also gets me excited to work with the teacher and participate in the class. I like how they emphasize the realistic aspects of learning and participating, rather than simply laying out the work to be done (NDPSWJ, LFS).

What these data may suggest is that LFS participants are not personally interested in this course *but* the language of the syllabus makes them feel the course would be interesting to take.

Workload of the course

Both LFS and CFS participants had similar perceptions of the relationship between the expected workload and the value or usefulness of that work (Table 4). When asked what a student would need to do to be successful in the course, participants in both groups indicated they would need to put forth effort, mirroring their quantitative responses. For example, one participant suggested that "a student would need to attend and participate in discussions as well as do all assignments with the help of multiple resources" (9BWFH7, LFS). Another thought they would need to "read the book and come to class every day and do assignments" (7MUJJE, CFS).

While the types of work expected were similarly represented in LFS and CFS participant responses (e.g., class attendance, completion of assignments), the quality of these statements differed between the two groups. LFS participants continually referenced more active learning approaches in how they would be successful in the course, such as understanding the readings, working in groups, and participating in class. For example, to be successful in the learning-focused course one LFS participant commented:

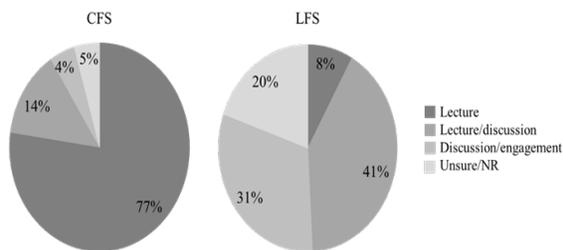


Figure 2. Frequency of types of in-class activities mentioned in open-ended response question.

Table 4. Participants' Perceptions of the Course Based on the Syllabus

Construct	Prompt	CFS n=66 (SD)	LFS n=61 (SD)
Learning in the course	I expect to learn a lot in this course.	3.89 (1.05)	4.54 (.92)**
	This course would help me learn important concepts.	3.70 (1.05)	4.28 (1.07)**
	This course would help me learn valuable study skills.	3.50 (1.17)	3.93 (1.12)*
	This course would help me understand how experts approach this topic.	3.33 (1.19)	4.41 (1.02)**
	This course would teach me knowledge and skills applicable during college.+	3.39 (1.38)	4.08 (1.01)**
	This course would teach me knowledge and skills applicable for my future career.	2.85 (1.36)	3.15 (1.15)
Interest in the course	This course would be interesting to take.+	3.38 (1.33)	3.80 (1.11)
	This course is of personal interest to me.	3.03 (1.53)	2.77 (1.40)
	The syllabus makes clear how the course content will be important in my life. +	2.86 (1.36)	4.57 (.97)**
	The syllabus makes me want to take this class.	3.55 (1.32)	3.77 (1.13)
Workload of the course	The amount of work in the course will correlate with the amount I learn.	3.83 (1.08)	4.20 (1.00)
	This course would require more work than most of my other courses.	3.45 (1.14)	4.08 (1.24)**
	The syllabus suggests that there is a lot of busy work in the course.	3.18 (1.46)	3.48 (1.36)
	The syllabus describes a course that is academically rigorous.+	4.00 (1.25)	4.98 (.70)**

Note. Constructs developed from inductive coding of qualitative data. Likert scale from 1=strongly disagree to 6=strongly agree.
 + violates Levine's Homogeneity of variance ($p < .05$), Kruskal-Wallis test. *significant $p < .05$. **significant $p < .01$.

Always keep up with the readings, and not just read them but form opinions and thoughts about them that they would express during lively in-class discussions. They would have to develop this personal historical type thinking and utilize it throughout their writing assignments” (H4TJ8V, LFS).

From the syllabus description, this participant understood the importance of the readings and how it would frame their thinking. The recognition of the depth of understanding required for the coursework and learning in this US History course was prevalent for LFS participants and markedly absent for the CFS participants. Thus, the perception of the relationship between workload and usefulness of that work were similar for both groups, but the quality of the workload and learning differed. This was also observed in participants' perceptions of the rigor of the course. LFS participants found the course represented by the syllabus was significantly more rigorous than CFS participants.

What we see in these data are that students have very distinct perceptions of the courses represented by the learning-focused and content-focused syllabi. Just from reading the syllabus, LFS students appear to understand the ways in which the instructor will teach the course, what type of learning they will be engaging in, and what it will take to be successful in the course. This is promising as student resistance to active learning can be from the lack of buy-in, lack of motivation for learning, and negative prior experiences with similar courses (Cavanagh et al., 2016; Seidel & Tanner, 2013; Tolman & Kremling, 2016). These factors can result in student resistance manifesting as passive resistance (e.g., not participating in class, consistently not completing assignments) or active resistance (e.g., arguing over grades, inciting other students to not engage) (Tolman & Kremling, 2016). The present study suggests that articulating the course structure through a learning-focused syllabus may help reduce resistant behaviors even before students set foot in the classroom.

Perceptions of the Instructor

Perceptions about the instructor are organized around the instructor's support of students and their willingness to engage with them in the course. Overall, LFS participants had significantly more positive perceptions of the instructor based on the syllabus than CFS participants (Table 5).

Instructor is supportive.

There existed clear differences in both the quantitative and qualitative data between LFS and CFS participants' perception of the

instructor, suggesting the document indeed influences how participants viewed the instructor teaching the course.

As an example, one LFS participant commented, “The instructor seems very friendly and personable and I like a lot of what they have to say” (45VURK, LFS), while a CFS participant commented that the instructor represented in the content-focused syllabus was “unfriendly, unapproachable, STRICT” (SB6Q8F, CFS). Participants in the LFS group also perceived the instructor as more caring, with one participant commenting, “He cares about his students' success” (WRABSM, LFS) and, “They want to have a personal connection with the students” (DJUGPX, LFS). Another participant in the CFS group perceived the instructor as uncaring, stating, “This is a Professor who isn't out to help or understand the needs of their students” (2G9NFV, CFS).

Instructor encourages engagement.

LFS participants also had significantly more positive perceptions of the instructor's willingness to engage with students in the course (Table 5), which were mirrored in the qualitative data. LFS participants believed the instructor would encourage student-teacher interaction, making comments like, “The instructor wants more class participation and he wants us to research a specific topic, which can be seen through the group projects” (RBDDTQ, LFS). The LFS group also more commonly perceived the instructor as one who would help students discover value in a course, responding, “He/she genuinely cares that the students LEARN the material and not just simply memorize it, that they understand his reasoning behind structuring the course the way he did” (VKVTJS, LFS). The perceived encouragement of the instructor for students to engage was also reflected in their responses to approaching the instructor for help. For example, one LFS participant commented, “The instructor seems to expect a lot from his students, but he also seems encouraging and understanding. I would not be afraid in the slightest to send him an email or attend his office hours” (SWFMHW, LFS).

In contrast, CFS participants held very different views of the instructor's willingness to engage with students in the course. CFS participants did not believe the professor would want to interact them, making comments like, “Assigns a lot of work to students and most of it is probably graded by TAs. I'll probably never talk with the professor one-on-one” (R27RPN, CFS). CFS participants suggested they might also be discouraged from interacting during class, stating that there would not be “much interaction (which isn't necessarily a bad thing)” (GZDMA3, CFS). Finally, CFS partici-

Table 5. Student Perceptions of Course Instructor from the Syllabus

Construct	Prompts	CFS n=66 (SD)	LFS n=61 (SD)
Instructor is supportive	Instructor cares about my success.	3.83 (1.12)	5.06 (.82)**
	Instructor cares about me as a person.	3.23 (1.08)	4.57 (.85)**
	Instructor has set high expectations and will help me meet them.	3.95 (1.03)	4.98 (.74)**
Instructor encourages engagement	Instructor encourages student- teacher interaction.	3.48 (1.21)	5.02 (.72)**
	Instructor helps student discover value in course content.	3.70 (1.04)	5.15 (.79)**
	Instructor is approachable.	3.50 (1.14)	5.11 (.78)**

Note. Constructs developed from inductive coding of qualitative data. Likert scale from 1=strongly disagree to 6=strongly agree. **significant $p < .001$ using Kruskal-Wallis test for all individual items

pants commented on the instructor's approachability, stating, "The instructor seems strict and more concerned about policy than students learning" (DSGC7R, CFS).

Similar to participants' perceptions of the document and course, there are clear distinctions in participants' perceptions of the instructor represented by the two syllabi. Prior studies demonstrate the importance of supportive and engaging faculty for student success, particularly 'high-risk'² students (e.g., Schreiner, Noel, Anderson & Cantwell, 2018; Umbach & Wawrzynski, 2005), and our results suggest the syllabus may be one way instructors can articulate their support and desire to engage students in learning. While not directly measured, the perceptions students have of their instructor from reading the syllabus may have more far reaching impact than might be expected.

SUMMARY

The present study examined students' perceptions of a learning-focused and content-focused syllabus to better understand how the syllabus influences perceptions of the document, course, and instructor. Both quantitative and qualitative data collected support the hypothesis that the syllabus does matter: for the most part, students who read a learning-focused syllabus have more positive perceptions of the document, instructor, and course than students who read a content-focused syllabus.

Overall, the LFS group had significantly more positive perceptions of the actual document than the CFS group. LFS participants found the document significantly more thorough but also more difficult to follow. It is true that learning-focused syllabi tend to be longer than others. However, students still found the learning-focused syllabus more interesting than students who read the content-focused syllabus. Thus, attempts to make the learning environment more transparent through the syllabus document may outweigh students' perceptions of length. The perceived difficulty of following the document may also have more to do with students' expectations about the purpose of syllabi than clarity of the actual document.

LFS participants perceived the instructor information, course materials, course objectives, assessment activities, and tips for success significantly more helpful than CFS participants. This is consistent with the emphasis learning-focused syllabi place on goals and objectives, assessment of learning, and overall student success. The two components most characteristic of content-focused syllabi—grades and policies—are perceived to be no more or no less helpful than those presented in learning-focused syllabi. In other words, the over-emphasis of policies and grades in content-focused syllabi and, possibly, the under-emphasis of these in learning-focused syllabi appear to be lost on students, at least when the syllabi are not directly compared.

LFS participants had significantly more positive perceptions of the tone of the syllabus, especially aspects related to how caring they perceived the instructor. Interestingly, students find neither

type of syllabus condescending. This is important because one of the one most commonly expressed beliefs by faculty when developing learning-focused syllabi in our course design work is that the document feels condescending. But, the informal and sometimes personal language adopted in many learning-focused syllabi does not lead to negative perceptions, at least for our study participants.

Overall, LFS participants had significantly more positive perceptions of the course than CFS participants. Participants' perceptions of whether the course represented by the syllabus would require more work than their other courses was significantly higher for the LFS participants. This is not surprising given that learning-focused courses rely on active pedagogies and self-directed learning and this is often explicitly stated in learning-focused syllabi. And, the LFS group expected to learn more important concepts, more important study skills, skills relevant to their college and future careers, and to better understand how to think like an expert. This perception is likely shaped by course descriptions and schedules in learning-focused syllabi which are often framed in provocative or engaging questions that help the learner discover meaning in the content. It is also likely influenced by learning objectives that consider cognitive and affective components of learning.

LFS participants also perceived the course associated with the syllabus they read would involve less lecturing and more active learning strategies. These perceptions likely stem from the explicit descriptions of instructional strategies in learning-focused syllabi, strategies that rely on active and collaborative learning techniques such as small-group discussion, case study analysis, and debates. The CFS group perceived that the course would rely almost exclusively on lecturing. Whether or not the syllabus indicates that lecture is a primary mode of instruction, students' past experiences likely impact this belief and possible bias.

Lastly, LFS participants had significantly more positive perceptions of the instructor than CFS participants; specifically, they believed the instructor would be more approachable, caring, encouraging, helpful, and supportive. This is significant in that students can have distinct perceptions of their instructor just from reading the syllabus. Further, the tone and language of a content-focused syllabus may have a negative impact on students' perceptions of the instructor.

IMPLICATIONS AND FUTURE WORK

The present study adds to the literature on course syllabi and motivation; however, the context-specific examination of freshmen and sophomore students' perceptions of U.S. History syllabi, as well as the small sample size, limits the generalizability of the results to other demographic groups, courses, and institution types. Regardless, the results are enlightening and open up new avenues of research around student perceptions of syllabi and their

potential impact on students' motivation for learning and eventually engagement in learning. Similar studies examining student perceptions of different types of courses with different student populations at different universities are warranted to qualify our results. With universities becoming more diverse, exploring the ways in which subgroups of students (e.g., male/female, Caucasian/Underrepresented) perceive content- and learning-focused syllabi differently is needed. Exploring how other student characteristics (e.g., learning approaches, ability beliefs, epistemological assumptions) and demographics (e.g., performance, major, year) mediate perceptions may help understand for which type of students the learning-focused syllabus is most useful and motivating.

Despite the limited generalizability of our results, there are still important implications of our work that may help researchers, educational developers, and instructors understand the importance and impact of different types of syllabi. For example, the results of our study have helped us develop concrete suggestions to improve the development and use of learning-focused syllabi. In particular, we suggest:

- Instructors should be explicit about the purpose of the syllabus, explaining the importance of all components of the document and how to use it not merely as a functional document with due dates but rather as a learning tool.
- Learning-focused syllabi should focus on, and instructors should emphasize, course objectives, tips for success, and structure of the schedule since these may shift students' focus to deep and meaningful learning both in cognitive and affective domains.
- While certain course policies and expectations are important to share with students, these don't need to be as prominent in the syllabus as some have suggested. In fact, it may actually be more effective to pull these out of the syllabus and place them in their own document. Regardless, they should be framed in supportive and inviting language.
- The tone of the syllabus might be one of the most important features of the document and should be friendly, approachable, and most of all it should reflect the aspirations and dreams an instructor has for their students.

In conclusion, this rigorous study provides data to support and guide all those who create and mandate syllabi. Importantly, instructors who develop learning-focused syllabi can positively affect motivation before students even step foot in the classroom, making the possibility for meaningful engagement during the semester much more likely.

NOTES

1. We acknowledge the low response rate in our study; however, the random sampling of students helps assure the sample is representative of the population (Cook, Heath, Thompson, 2000). We also acknowledge the possible sampling bias—where respondents may be different from non-respondents (Nulty, 2008)—introduced with any survey study and address limitations of our procedure at the end of the article.
2. High-risk students are those that are at risk of leaving higher education as a result of prior preparation or individual characteristics (Schriener et al., 2018)

REFERENCES

- Baecker, D. (1998). Uncovering the rhetoric of the syllabus. *College Teaching*, 46(2), 58.
- Bain, K. (2004). *What the best college teachers do*. Cambridge, MA: Harvard University Press.
- Becker, A. H., & Calhoun, S. K. (1999). What introductory psychology students attend to on a course syllabus. *Teaching of Psychology*, 26(1), 6-11.
- Biggs, J., Kember, B., & Leung, D. Y. P. (2001). The revised two-factor study process questionnaire: R-SPQ-2F. *British Journal of Educational Psychology*, 71, 133-149.
- Brown, P. C., Roediger III, H. L., & McDaniel, M. A. *Make it stick: The science of successful learning*. Cambridge, MA: Harvard University Press.
- Canada, M. (2013). The syllabus: A place to engage students' egos. In D. S. Knowlton, & K. J. Hagopian (Eds.), *New Directions for Teaching and Learning: No. 135. From entitlement to engagement: Affirming millennial students' egos in the higher education classroom*. (pp. 37-42). San Francisco: Jossey-Bass.
- Cavanagh, A. J., Aragón, O. R., Chen, X., Couch, B., Durham, M., Bobrownicki, A., Hanauer, D. I., & Graham, M. J. (2016). Student buy-in to active learning in a college science course. *CBE Life Sciences Education*, 15(4), 1-9. <https://doi.org/10.1187/cbe.16-07-0212>
- Cook, C., Heath, F., & Thompson, R. L. (2000). A meta-analysis of response rates in web-or internet-based surveys. *Educational and psychological measurement*, 60(6), 821-836.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage Publications.
- Doolittle, P. E., & Siudzinski, R. A. (2010). Recommended syllabus components: What do higher education faculty include in their syllabi? *Journal on Excellence in College Teaching*, 21(3), 29-61.
- Fink, S. B. (2012). The many purposes of course syllabi: which are essential and useful? *Syllabus*, 1(1), 1-12.
- Garavalia, L. S., Hummel, J. H., Wiley, L. P., & Huitt, W. G. (1999). Constructing the course syllabus: Faculty and student perceptions of important syllabus components. *Journal on Excellence in College Teaching*, 10(1), 5-21.
- Glaser, B. G. (1965). The constant comparative method of qualitative analysis. *Social Problems*, 12(4), 436-445.
- Golafshani, N. (2003). Understanding reliability and validity in qualitative research. *The qualitative report*, 8(4), 597-607.
- Harnish, R. J., & Bridges, K. R. (2011). Effect of syllabus tone: Students' perceptions of instructor and course. *Social Psychology of Education*, 14(3), 319-330.
- Harrington, C., & Thomas, M. (2018). *Designing a motivational syllabus: Creating a learning path for student engagement*. Sterling, VA: Stylus.
- Haynes, S. N., Richard, D., & Kubany, E. S. (1995). Content validity in psychological assessment: A functional approach to concepts and methods. *Psychological assessment*, 7, 238.
- Huba, M. E. & Freed, J. E. (2000). *Learner-centered assessment on college campuses: Shifting the focus from teaching to learning*. Needham, MA: Allyn and Bacon.
- Ludy, M., Brackenbury, T., Folkins, J. W., Peet, S. H., Lagendorfer, S. J., & Beining, K. (2016). Student Impressions of syllabus design: Engaging versus contractual syllabus. *International Journal for the Scholarship of Teaching and Learning*, 10(2), 1-23.

- Neadheriser, S. (2016). Having students “sign on the dotted line”: The implications of treating the syllabus as a contract. *Syllabus*, 5(1), 1-12.
- Newman, I., & McNeil, K. A. (1998). *Conducting survey research in the social sciences*. Lanham, MD: University Press of America.
- Nulty, D. D. (2008). The adequacy of response rates to online and paper surveys: What can be done? *Assessment & Evaluation in Higher Education*, 33(3), 301-314.
- O'Brien, J. G., Millis, B. J., & Cohen, M. (2008). *The course syllabus: A learning-centered approach* (2nd ed.). San Francisco, CA: Jossey-Bass.
- Palmer, M. S., Bach, D. J., & Streifer, A. C. (2014). Measuring the promise: A learning-focused syllabus rubric. *To Improve the Academy*, 33(1), 14-36.
- Parkes, J., Fix, T. K., & Harris, M. B. (2003). What syllabi communicate about assessment in college classrooms. *Journal on Excellence in College Teaching*, 14(1), 61-83.
- Saville, B. K., Zinn, T. E., Brown, A. R., & Marchuk, K. A. (2010). Syllabus detail and students' perceptions of teacher effectiveness. *Teaching of Psychology*, 37, 186-189, doi: 10.1080/00986283.2010.488523
- Schreiner, L. A., Noel, P., Anderson, E. C., & Cantwell, L. (2018). The impact of faculty and staff on high-risk college student persistence. *Journal of College Student Development*, 52(3), 321-338.
- Schunk, D. H., Pintrich, P. R., & Meece, J. R. (2007). *Motivation in education: Theory, research, and applications* (3rd ed.). Upper Saddle River, NJ: Prentice Hall.
- Seidel, S. B., & Tanner, K. D. (2013). “What if students revolt?”—Considering student resistance: Origins, options, and opportunities for investigation. *CBE Life Sciences Education*, 12(4), 586-595. <https://doi.org/10.1187/cbe-13-09-0190>
- Stains, M., Harshman, J., Barker, M. K., Chasteen, S. V., Cole, R., DeChenne-Peters, S. E., Eagan Jr., M. K., Esson, J. M., Knight, J. K., Laski, F. A., Levis-Fitzgerald, M., Lee, C. J., Lo, S. M., McDonnell, L. M., McKay, T. A., Michelotti, N., Musgrove, A., Palmer, M. S., Plank, K. M., Rodela, T. M., Sanders, E. R., Schimpf, N. G., Schulte, P. M., Smith, M. K., Stetzer, M., Van Valkenburgh, B., Vinson, E., Weir, L. K., Wendel, P. J., Wheeler, L. B., & Young, A. M. (2018). Anatomy of STEM teaching in American universities: A snapshot from a large-scale observation study. *Science*, 359, 1468-1470. DOI: 10.1126/science.aap8892
- Stevens, E. M., & Gibson, R. (2017). An examination of mastery- and performance-based orientations in strategic communication syllabi and suggestions for rhetorical and pedagogical improvement. *Journal on Excellence in College Teaching*, 28(2), 61-80.
- Tolman, A. & Kremling, J. (2016). *Why students resist learning: A practical model for understanding and helping students*. Stylus Publishing, LLC.
- Umbach, P. D., & Wawrzynski, M. R. (2005). Faculty do matter: The role of college faculty in student learning and engagement. *Research in Higher Education*, 46(2), 153-184. <https://doi.org/10.1007/s11162-004-1598-1>
- Wiggins, G. (1998). *Educative assessment: Designing assessments to inform and improve student performance*. San-Francisco, CA: Jossey-Bass.
- Wiggins, G. & McTighe, J. (2005). *Understanding by design* (2nd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.
- Wigfield, A., & Eccles, J. S. (2000). Expectancy-value theory of achievement motivation. *Contemporary Educational Psychology*, 25(1), 68-81.