

	School	Part 1 Grad Req	Fail 3 times	Part 2 Grad Req	If Fail	Combined Board Be Required	
1	Boston University	No	Keep taking; students are <u>required to take, but not necessarily pass</u> , to be promoted	No	Still get diploma because will have to pass for license; students are <u>required to take, but not necessarily pass</u> , to graduate		1/6/2016
2	Creighton	Yes	Clinic Req, Academic Suspension	No	No	Yes	
3	Kentucky	Yes	Modified curriculum or suspension	No	<u>Still get diploma</u> because will have to pass for license	Yes	
4	LECOM	No	No	No	No	No	
5	Louisville	No	No	No	No	No	
6	Maryland (peer school)	Yes	3 attempts, then dismissed. The student may be afforded th opportunity for readmission if they are successful on a 4th and final attempt	No	Part 2 is not a graduation requirement	Not yet determined	2/2/2016
7	Michigan (peer school)	No		No	They are NOT graduation requirements for Michigan. For a while it was- before 2009, our first attempt pass rates have consistently been >93%, then we discontinued that policy as we had no control over the exam, holding student's degrees once they had completed all of our requirements was problematic.		2/1/2016
8	Midwestern	Yes	Clinic req after 3rd attempt before PSpC subject to dismissal	No		No	
9	Mississippi	Yes	Dismissal	No	Does not stop graduation	?	
10	Nova Southeastern U	Yes	Part 1 is required for traditional students' continuation in the program from D2 to D3 years;	No	Part 2 is not a degree requirement		1/5/2016
11	Southern Illinois University	Yes	Cannot progress into the clinic until they pass. If they fail after 3 attempts, they will be put on a special academic program where they will have to repeat their second year but take year I courses	No	Not a graduation requirement. No penalty for failing. Its up to student to pass it.	Yes	1/12/2016
12	UCSF (peer school)	No	No	No	No	No	
13	UIC	Yes	Keep taking, dismissed after 5 failures	No	Keep taking, if 5 failures <u>student can petition promotions committee to award degree.</u>	Yes	1/5/2016
14	VCU	No	No	No	No	No	
15	Western University	Yes	1st failure, remediation course and mock exam, same with 2nd failure. 3rd failure can not graduate and remains as a student until they attempt it again. Devolp a plan of conitued clinical and academic requirements until completed.	No	<u>Still get diploma</u> because will have to pass for license	Not sure	1/6/2016
16	WVU	Yes	Cannot move to 4th year	No	Can graduate	Yes	1/11/2016

17	Alabama	Yes	Required for promotion to D3 and for graduation. Part I: 2 failures, repeat 2nd year. 3 failures dismissal.	Yes	Part II: 3 failures dismissal.		1/6/2016
18	A.T. Still University Arizona School of Dentistry & Oral Health	Yes	After failing 2 times, students are put on Academic Probation; after 3 times, they may be dismissed or asked to withdraw from the program.	Yes	Do not receive diploma until they pass as they have not met the graduation requirements	Yes	1/5/2016
19	Baylor	Yes	Keep Taking	Yes	Graduate, but no diploma until pass. NB: Think this means participate in commencement ceremony, but no degree.	Yes	
20	Case	Yes	Can not start clinic until pass	Yes	Delayed Graduation	Yes	1/6/2016
21	Florida	Yes	Probation	Yes	No diploma until pass	?	1/5/2016
22	Georgia	Yes	Dismissal	Yes	Dismissal after 3 attempts	Yes	
23	Howard	Yes	Successful completion required for promotion to D3 year. If not taken and/or passed prior to Fall of D3 year, repeat the D2 year. Three failures results in dismissal.	Yes	Required for clearance to graduate and receive diploma. No diploma until passed. After fourth failure, student dismissed.		2/5/2016
24	Iowa	Yes		Yes			2/2/2016
25	LOMA LINDA	Yes	Dismissal	Yes	Graduate, but no diploma until pass. NB: Think this means participate in commencement ceremony, but no degree.	Not Yet Determined	1/5/2016
26	Marquette	Yes	Dismissal	Yes	Dismissal after 3 attempts	Yes	
27	UMKC	Yes	2nd Probation, 3rd dismissal	Yes	No Graduation until Pass	Yes	1/6/2016
28	Nebraska	Yes	Clinic Req, repeat must finish with in 6 years	Yes	Get one more year to complete or dismissed	Yes	
29	UNLV	Yes	Have until December of 3rd yr -Academic Suspension after 2 attempts and repeat year after pass, third failure suspension after 24 months then dismiss	Yes	Can walk with class, but have 24 months after graduation to complete. Afterthat they will be dismissed with no degree	Yes	
30	North Carolina (peer school)	Yes	Must pass to progress to third year	Yes			2/2/2016
31	NYU	Yes	After first failure, 50% reduced clinic schedule. If second attempt unsuccessful, 100% reduction in time. Dismissal after 3d unsuccessful attempt. Must pass in one year after first attempt.	Yes	If by graduation did not pass, can leave without diploma. No enrollment required. Has 14 months to pass after original graduation date.	Yes	1/5/2016
32	Ohio State (peer school)	Yes	No specification	Yes	No Graduation until Pass	Yes	1/5/2016
33	Pennsylvania	Yes	Not Promoted to next year	Yes	No Diploma until pass	Yes	

34	Pittsburg	Yes	For part 1, it must be completed before July of the second year to enter clinic; if not, they are suspended and have to wait another year to re-enter the clinic if they have passed. If they have not passed by that time or if they fail a third time, they are dismissed. For part 2, they must pass within a 5 year time frame of when they started the program. If not, or if they fail a third time, they are dismissed.	Yes	For part 2, they must pass within a 5 year time frame of when they started the program. If not, or if they fail a third time, they are dismissed.		1/5/2016
35	UCLA	Yes		Yes	No graduation until passed	Yes	2/2/2016
36	UOP	Yes	Oral Exam before retaking	Yes	Oral Exam before retaking	Yes	
	UPR			Yes			
	USC	Yes		Yes			3/4/2017
37	UTHSCSA (peer school)	Yes	Can not move to D4 until pass Repeat 3rd year	Yes	No Graduation until Pass, Keep in clinic until pass	Yes	1/5/2016
38	UT SOD Houston	Yes	Cannot move to D4 until pass Repeat 3rd year or possible dismissal	Yes	Can walk with class, but no diploma until they pass	Yes	1/5/2016
39	Temple Kornberg SOD	Yes	If not passed Part I by the first day of Spring semester junior year cannot accept any new patients until NBDE I is successfully completed. If not passed by the start of the Fall semester senior year must take a mandatory one-year leave of absence. If the student has not passed Part I by the start of the following Fall semester, he/she is dismissed from of the School, with an option to apply for readmission with advanced standing after passing the Part I examinations. There is no guarantee of acceptance with advanced standing.	Yes	Can walk with class, but have 5 years from matricuatlion to pass (6 years if they have taken a leave of absence)	yes	1/5/2016
	Part 1		Part 2				
	N=	41	N=	41			
	yes=	34	yes=	25			
	no=	6	no=	15			
	% no	15%	% no	37%			

Evidence for high-impact practices in active learning and student engagement	Absent	Partially Present	SE:High Evidence	High Impact Pedagogical Practices (HIPP)
Include assignments or activities that help students develop strategies for regulating their own learning				
Align instructional practices with students' prior knowledge and cognitive ability. Prompt students with open-ended, provoking questions during in-class discussions or online-threaded discussions				
Require students to make presentations during class or online				
Require students to work with other students either in- or out-of-class on projects or presentations; explicit mechanism in place to evaluate team skills and contributions of each student to final project				
Using a variety of teaching techniques including games, debates, skits, films, experiments, role playing, stories and higher order thinking activities (may supplement rather than replace lecture)				
Require multiple drafts of written papers and assignments (e.g. sequence of assignments that build to a final large project and provide feedback so students can improve work)				
Syllabus describes required activities in which students mentor, tutor or teach other students (e.g. a peer review as a required activity/assignment associated with a written paper)				
Work with students on research projects or other activities outside of course or programme requirements				
Syllabus includes a study abroad or travel component (e.g. class travels to other locations as a group)				
Syllabus describes expectations for an independent study				
Syllabus describes a community-based project, community service or volunteer work as a graded assignment				
Syllabus includes attendance or participation in one or more cultural performances, civic activities or advocacy practices as a graded element.				
Include diverse perspectives (different races, religions, genders, political beliefs, etc.) in class discussions and written assignments				

EXAMPLES	Absent	Partially Present	SE:High Evidence	High Impact Pedagogical Practices (HIPP)
	100% lecture-oriented class	Recommend students form study groups	Use incentive to reinforce formation of study groups. Provide guidelines for team skills or use formal exercises, activities or assignments to develop team skills (e.g. create a set of team roles and rules)	Assign group projects with no form of peer evaluation included Rote homework assignments (busy work)
	Lecture from the assigned text only	Assign group projects with no form of peer evaluation included	Assign group projects that are graded based on final product and peer evaluation (include rubric)	Suggest that students mentor, tutor or teach other students
		Rote homework assignments (busy work)	Encourage students to attend or become involved in cultural performances (Mechanism in course for earning extra credit for this or making this a graded/required component of the course)	Multiple paper assignments (practice at writing) but assignments are not clearly cumulative
		Suggest that students mentor, tutor or teach other students	Incorporate multiple teaching techniques with lecture (games, debates, skits, films) (These are described on the syllabus)	Evidence of high-impact student engagement

		Multiple paper assignments (practice at writing) but assignments are not clearly cumulative	Multiple papers that build to completion of a larger project	Use incentive to reinforce formation of study groups. Provide guidelines for team skills or use formal exercises, activities or assignments to develop team skills (e.g. create a set of team roles and rules)
			Paper assignment includes a formal peer review activity before students submit the final draft of the paper for evaluation	Assign group projects that are graded based on final product and peer evaluation (include rubric)
				Encourage students to attend or become involved in cultural performances (Mechanism in course for earning extra credit for this or making this a graded/required component of the course)
				Incorporate multiple teaching techniques with lecture (games, debates, skits, films) (These are described on the syllabus)
				Multiple papers that build to completion of a larger project
				Paper assignment includes a formal peer review activity before students submit the final draft of the paper for evaluation
				High-impact pedagogical practices (2013 rubric)

				Graded participation in class discussions (significant)
				Flipped class preparation: Connect what students read, or prepared in advance, to course content (evaluated prior work to ensure it is completed)
				Work with other students on projects during class Work with classmate outside of class on assignments Make a class presentation
				Prepare two or more drafts of a paper or assignment Serious conversations with 'different' others
				Apply learning to real-world problems or experiences
				Integrate ideas and reflect on how and what students are learning Participate in campus event, speaker or activity related to course Connect with a learning support service or resource (required) Participate in a community-based project as part of the course

				Small-scale experience or introduction to a high-impact practice (undergraduate research, service learning, study abroad, internship)
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Required components	Present	Absent
Course number Course title		
Semester and year offered Instructor(s) Name(s) Contact information		
Office number or Office telephone or Email address or		
Web address (eLearning or faculty web page for course) Office hours		
List of required texts, recommended texts and readings		
Course description from catalogue		
Course student learning outcomes (SLOs) identified		
Course SLOs written in active language and describe student behaviours or student work that could be directly measured		
Topics covered in the course		
Exams and grading. Describe how the instructor will evaluate student work in the course. Describe required exams and assignments and how these will be evaluated and weighted to compute the final grade in the course		
Statement about proctored exams (required only for courses with online exams)		
Attendance policy (eLearning: participation element is a part of the grade, policies about logging onto the class site regularly)		
Statement of University academic conduct policy/plagiarism policy		
Notification of use of turnitin (required only if instructor has written assignments and plans to use turnitin to evaluate originality of student writing)		
Statement about assistance for students with special needs (ADA statement). Must include contact information for the campus ADA office (link to website, telephone number)		
Emergency planning information for course continuity (e.g. weather, campus epidemic)		
Calendar of important events (schedule of required readings, assignment due dates, exam dates, etc.). Dates can be identified as tentative dates and/or subject to change		
Teach to or assess UFCD competency		
'Best practice' components		
Class meeting time and location (both must be present; eLearning courses are automatically present)		
ISBN number of each required textbook		
Instructor goals for the course or description of the role of the course in the programme or description of how the course will prepare students for tasks encountered in other courses		
Introduction of instructor/description of professional background		
Description of software or technology skills required for the course or description of study strategies that will help students succeed in the course. Includes activation and use of email account as a technology skill. Does not include the use of laptops in class unless these must run a specialised software used for course activities		

Assistance to all students: Strategies for success in the course; sources for assistance made available to all students (Writing Lab, tutoring). May include reference to hand-outs, extra problems, etc. that students can access in eLearning or on the web. Not mere encouragement to students to visit the instructor during office hours or ask for assistance or mere reference to technical skills needed		
Instructor-established policies for the course (acceptance of late work; permission to make up a missed exam; procedures to request extensions of deadlines or arrange alternate exam dates when conflicts arise with official University functions). May also include classroom behaviour policies (use of laptops in class, cell phones, eating, sleeping, face- to-face civility matters)		
Expectation for classroom decorum/behaviour/civility. In eLearning courses: expectations for decorum in online discussions, email, etc. In face-to-face classes, policies about laptop use during class		
Calendar includes reminders of key University deadlines (last day to withdraw with an automatic W) and provides feedback on graded work before these deadlines		
Descriptions of specific projects. Any reference to a specific assignment or project beyond the weight it receives in final grade computation. May include reference to additional information that will be provided in a separate hand-out. (Note: Must be separate from references to projects in the Exams and Grading weights or course calendar sections.)		
Grading rubric(s) for assignments provided in the syllabus (either a grading key or formal rubric)		
Reference to use of a rubric for grading an assignment (rubric is provided on website, as a hand-out, etc., apart from syllabus)		

Assessing the culture of teaching and learning through a syllabus review

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Content analysis of course syllabi can answer a variety of questions about the structure of courses and the campus culture of teaching and learning. The authors report a review of the full population of undergraduate syllabi at one institution during one academic term ($n = 1153$), including rubric design and training procedures for reviewers. The authors discuss the rich data generated by a comprehensive analysis of syllabus content, including student learning outcomes, descriptions of assignments and projects, and descriptions of activities and strategies instructors use to promote student learning. The review generated inventories of courses that addressed learning outcomes and associated assignments. Librarians and the Centre for Teaching, Learning and Assessment will use these inventories to approach departments and faculty with shared interests (e.g. information literacy, high-impact pedagogical practices, twenty-first century skills) and initiate collaborations to develop library workshops, resource materials and new or improved assignments to promote these learning outcomes. The review findings document changes in the campus culture of teaching and learning and inform efforts for continuous improvement.

Keywords: syllabus review; educational assessment; information literacy; high-impact pedagogical practices; twenty-first century skills

Many campus organisations create and implement activities intended to modify the institutional culture. Centres for Teaching and Learning provide workshops and consultations to achieve goals such as shifting the campus culture to a more learning-centred orientation. Writing centres provide resources to students and faculty to improve written communication by assisting faculty when they design writing assignments and provide students with feedback. Similarly, reference librarians create library instruction activities and consult with faculty on how to promote information literacy skills, and engage students in appropriate uses of library databases and scholarly resources. In addition, many institutions create campus-wide initiatives to improve the quality of student learning on targeted learning outcomes through a Quality Enhancement Plan (those accredited in the USA by the Southern Association of Colleges and Schools Commission on Colleges) or an Academic Quality Improvement Programme (those accredited in the USA by The Higher Learning Commission of the North Central Association). Tracking the impact of large-scale initiatives can be a challenge; however, course syllabi provide a rich source of

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archival data that researchers can use to document curriculum structures and provide evidence about the approaches faculty take to teaching and learning (Allen 2004; Maki 2010; Suskie 2009).

Discussions of effective teaching and design of a learning-centred course frequently include recommendations for the content of the course syllabus (e.g. Davis 1993; Nilson 2003; O'Brien, Millis, and Cohen 2008; Svinicki and McKeachie 2011). The content of a syllabus is often determined in part by institutional conventions. Although certain elements of syllabus content may be constrained by institutional policy, instructors write syllabi for their student audience to describe the organisation and detailed content of the course. Thus, instructors describe their best intentions for the course in a syllabus: the topics they intend to cover, the assignments they expect students to complete, and the strategies they plan to use to evaluate student learning and assign grades or marks. Outside of direct observation of classroom interactions, course syllabi are 'unobtrusive but powerful indicators of what takes place in classrooms' (Bers, Davis, and Taylor 2000). Syllabi frequently serve as a convenient and relatively inexpensive assessment of the instructional practices instructors use in their courses (Cullen and Harris 2009; Willingham-McLain 2011).

The 'bones' of syllabus content are constrained by institutional expectations, but instructors have considerable control over the organisation of the course, the design of learning activities, and the nature of class climate they create and implement in their courses. Although the institution studied requires specific content on course syllabi, including statements about specific institutional policies (represented by the required elements section of the rubric presented in Table 1), instructors create and post course syllabi with little direct oversight or review of syllabus content, including discussions of specific learning activities and instructor goals.

The University of West Florida, like public and private institutions of higher education in the United States, has policies and procedures that enable a student to appeal a grade or file a formal complaint or grievance about a course. An instructor whose syllabus clearly describes required assignments and how they contribute to the calculation of the course grade can easily support the decisions made about a grade if the decisions are consistent with the policies and procedures described in the syllabus. Successful grade appeals occur most often when the syllabus is vague or the instructor does not follow the procedures described in the syllabus. Thus, instructors have strong personal motivations to describe courses and learning activities that reflect the true structure of a course.

Reasons for conducting syllabus reviews and their scope vary. Researchers have conducted syllabus analyses to examine institutional teaching culture and general education learning outcomes (e.g. Doolittle and Siudzinski 2010; Eberly, Newton, and Wiggins 2001; Stanny 2010), evaluate institutional efforts to assign writing in courses for Writing Across the Curriculum programmes (Graves, Hyland, and Samuels 2010), and examine the alignment of programme student learning outcomes (SLO) with learning outcomes identified by an associated disciplinary professional society (e.g. Cashwell and Young 2004; Grauerholz and Gibson 2006). Additionally, reference librarians employ syllabus reviews to create workshops and other library instruction activities that align with the information literacy learning outcomes articulated by instructors and departments (e.g. Head et al. 2013; Hrycaj 2006; Lauer, Merz, and Craig 1989; O'Hanlon 2007; Sayles 1984; Smith et al. 2012; Williams, Cody, and Parnell 2004).

The University of West Florida has conducted four syllabus reviews across a five-year period. The specific research questions addressed in these reviews varied

Table 1. Core rubric for a syllabus review (required components and 'best practice' components).

Required components

Course number

Course title

Semester and year offered

Instructor(s) Name(s)

Contact information

Office number *or*

Office telephone *or*

Email address *or*

Web address (eLearning or faculty web page for course)

Office hours

List of required texts, recommended texts and readings

Course description from catalogue

Course student learning outcomes (SLOs) identified

Course SLOs written in *active language* and describe student behaviours or student work that could be directly measured

Topics covered in the course

Exams and grading. Describe how the instructor will evaluate student work in the course. Describe required exams and assignments and how these will be evaluated and weighted to compute the final grade in the course

Statement about proctored exams (required only for courses with online exams)

Attendance policy (eLearning: participation element is a part of the grade, policies about logging onto the class site regularly)

Statement of University academic conduct policy/plagiarism policy

Notification of use of turnitin (required only if instructor has written assignments and plans to use turnitin to evaluate originality of student writing)

Statement about assistance for students with special needs (ADA statement). Must include contact information for the campus ADA office (link to website, telephone number)

Emergency planning information for course continuity (e.g. weather, campus epidemic)

Calendar of important events (schedule of required readings, assignment due dates, exam dates, etc.). Dates can be identified as tentative dates and/or subject to change

'Best practice' components

Class meeting time and location (both must be present; eLearning courses are automatically present)

ISBN number of each required textbook

Instructor goals for the course or description of the role of the course in the programme or description of how the course will prepare students for tasks encountered in other courses

Introduction of instructor/description of professional background

Description of software or technology skills required for the course or description of study strategies that will help students succeed in the course. Includes activation and use of (institution omitted to maintain the integrity of the review process) email account as a technology skill. Does not include the use of laptops in class unless these must run a specialised software used for course activities

Assistance to all students: Strategies for success in the course; sources for assistance made available to all students (Writing Lab, tutoring). May include reference to hand-outs, extra problems, etc. that students can access in eLearning or on the web. Not mere encouragement to students to visit the instructor during office hours or ask for assistance or mere reference to technical skills needed

Instructor-established policies for the course (acceptance of late work; permission to make up a missed exam; procedures to request extensions of deadlines or arrange alternate exam dates when conflicts arise with official University functions). May also include

(Continued)

- classroom behaviour policies (use of laptops in class, cell phones, eating, sleeping, face-to-face civility matters)
 - Expectation for classroom decorum/behaviour/civility. In eLearning courses: expectations for decorum in online discussions, email, etc. In face-to-face classes, policies about laptop use during class
 - Calendar includes reminders of key University deadlines (last day to withdraw with an automatic W) and provides feedback on graded work before these deadlines
 - Descriptions of specific projects. Any reference to a specific assignment or project beyond the weight it receives in final grade computation. May include reference to additional information that will be provided in a separate hand-out. (Note: Must be separate from references to projects in the Exams and Grading weights or course calendar sections.)
 - Grading rubric(s) for assignments provided in the syllabus (either a grading key or formal rubric)
 - Reference to use of a rubric for grading an assignment (rubric is provided on website, as a hand-out, etc., apart from syllabus)
-

with each implementation, but all of the syllabus reviews employed a core rubric that identified syllabus components expected for all course syllabi, and additional components associated with ‘best practices’ for creating a learning-centred course (Appleby 1994; Davis 1993; Diamond 2008; Fink 2003; Grunert 1997; Lang 2008, Nilson 2003; O’Brien, Millis, and Cohen 2008; Svinicki and McKeachie 2011; Weimer 2002). Subsequent reviews added or modified rubric elements to reflect changing institutional expectations about syllabus content. Although each review gathered information about the use of active and engaging learning strategies, the researchers refined the rubric elements for these research questions to improve inter-rater agreement and the diagnostic quality of the data generated. We also added rubric elements to the core rubric to address specific curriculum questions. Three reviews documented the distribution of learning outcomes for general education across courses included in the general education curriculum. The most recent review developed inventories of courses that address information literacy learning outcomes and twenty-first century skills while revisiting questions about syllabus quality and the culture of teaching and learning addressed in previous reviews.

The concept of twenty-first century skills emerged from an initiative by the Association of American Colleges and Universities (AAC&U), an advocate for the public commitment to undergraduate liberal education that provides leadership for educational improvement and reform. This initiative identified a set of 12 ‘Essential Learning Outcomes’ for a liberal education, most recently articulated as guiding principles for liberal education in the twenty-first century (AAC&U 2007). These learning outcomes resonate with the conventional goals and aspirations of a liberal education (knowledge of human cultures and the physical and natural world; intellectual and practical skills: inquiry and analysis, critical and creative thinking, written and oral communication, quantitative literacy, information literacy, teamwork and problem solving; outcomes aligned with personal and social responsibility; and integrative learning).

This article describes the history and development of the four reviews, as well as the basic syllabus review rubric and rubric elements created to address specific research questions. Next, we describe the procedures we used to train reviewers to meet reliability criteria and maintain scoring reliability through the review process. Finally, we identify the specific research questions addressed in the most recent

review, describe the findings, and discuss how the data were used to inform decisions and document the impact of campus-wide efforts toward improvement.

Method

Syllabus review rubric

The common core elements for the rubric, used consistently to evaluate syllabus content in all four reviews, are presented in Table 1. These elements describe specific syllabus components that instructors commonly include in a course syllabus. Components include required elements for all syllabi based on institutional policy (such as office hours and required texts), and ‘best practice’ components described in the scholarly literature on course design and syllabus construction (instructor goals for the course and suggestions for effective study strategies for students). Raters scored rubric elements as *present* or *absent*, with the exception of scores for the use of measurable language for SLOs, which was scored as *present*, *partially present* (*2 or more SLOs are not measurable*), or *absent*.

Over the course of the four syllabus reviews, the institution clarified existing policies about required syllabus content and created new policies to require additional syllabus content. Researchers revised the rubric to reflect new expectations for required syllabus content. The increased clarity about required and optional content enabled researchers to define two composite scores for syllabus quality based on the number of required elements included in a syllabus and the number of best practice elements. Best practice elements describe evidence-based practices that contribute to student engagement or create a more learning-centred class, but are not explicitly required by institutional policy. Some best practice elements are properly treated as optional, because they may not be relevant or appropriate for all class formats.

To answer questions about abstract qualities of syllabi, such as evidence of student engagement, we computed scores based on multiple binary rubric elements; each element assessed the presence of a specific, unambiguous component that contributed to this abstract concept of student engagement. Although reviewers used the same set of criteria to make their judgements, we found that reviewers achieved greater consistency when they made judgements based on a series of discrete decisions (e.g. students work on teams to complete a project, students submit multiple drafts of a paper) in the most recent review than when reviewers made global judgements on a single rubric element for *student engagement* during earlier reviews. Recording scores for multiple discrete behaviours created an added benefit; the individual rubric scores increased the granularity of the findings. Because the data recorded scores for each practice, researchers could report the frequencies of individual practices when they described the findings for the abstract concepts based on aggregated scores. The increased detail allows researchers to frame new assessment questions in terms of narrower definitions of these constructs (e.g. what does the culture of student engagement look like when we invoke a higher standard for engaging activities) simply by computing a new measure derived from relevant binary data elements.

Additional elements of the rubrics evolved with the changing scope of the four reviews. The first three reviews examined syllabi for lower level courses that met a general education requirement. The rubric for the first review (2008) evaluated the quality of written SLOs, emphasising the use of measurable language for SLOs (Allen 2004; Maki 2010; Suskie 2009), and gathered evidence to document the use

of active learning strategies that promote student engagement (Kuh 2008; Kuh et al. 2005). The second syllabus review (2010) elaborated the rubric to identify the alignment of course SLOs with specific general education SLOs, and clarified rubric criteria for judgments reviewers made about evidence for active learning and student engagement. The third syllabus review (2011) added syllabus elements to reflect changes in institutional expectations about required syllabus content (e.g. inclusion of a statement for coping with weather-related or other emergencies, new campus policies governing the use of plagiarism-detection software and proctored examinations in online courses). This rubric also refined the evaluation of evidence for active learning to create a global assessment with three categories (*no evidence, minimal engagement, high-impact engagement*).

The most recent syllabus review (2013) expanded the population of syllabi to include all undergraduate courses offered during a single academic term (excluding laboratory courses, studio courses, directed studies, service learning and internships), and gathered data to address multiple questions about approaches to teaching. This review also identified courses with SLOs and assignments that aligned with information literacy standards (articulated by the Association of College & Research Libraries, ACRL 2000), and courses with SLOs and assignments that aligned with twenty-first century and professional skills (articulated by the AAC&U 2007; Hart Research Associates 2013). Finally, using instructional activities defined by the National Survey of Student Engagement (NSSE) and the AAC&U as high-impact pedagogical practices (HIPPs), the review determined the number of syllabi that described the use of one or more HIPPs. Many HIPPs reflect learning activities that students self-report in their responses to questions on the NSSE (Kinzie 2013a, 2013b; Kuh 2008; Kuh et al. 2005). As a result, this syllabus review defined the evidence for active learning and student engagement in terms of these HIPPs and gathered granular data on the frequency of each HIPP (described in Table 2).

Establishing and maintaining inter-rater reliability

Each syllabus review included a formal process for establishing initial reliability for reviewers and procedures for maintaining and documenting calibration throughout the syllabus review process. In the most recent review, four graduate assistants reviewed 1153 syllabi offered at the University of West Florida during the fall term. A sample of syllabi ($n = 110$) was randomly selected for training reviewers, conducting weekly calibration checks and documenting inter-rater agreement. When selecting the training and calibration sample, the random process was constrained to select only one syllabus for courses offered as multiple sections (i.e. a course taught to different groups of students during the same term, with either the same or a different instructor for each group), and ensure that the sample included syllabi from multiple departments and all colleges.

During training, the four reviewers familiarised themselves with the rubric and review process by evaluating a small sample of training syllabi ($n = 6$). All reviewers scored all of the training syllabi, and researchers computed pair-wise inter-rater agreement (reviewers were randomly assigned to pairs). Disagreements were resolved through consensus and reviewers rescored the training syllabi. When reviewers achieved the target of at least 75% agreement averaged across rubric elements, they began scoring syllabi independently; the actual average agreement at the end of training was 87% pair-wise agreement. Reviewers scored syllabi in an

Table 2. Comparison of criteria used to evaluate active learning, student engagement and use of HIPP (2011 and 2013 reviews).

Evidence for high-impact practices in active learning and student engagement (2011 rubric)

- Include assignments or activities that help students develop strategies for regulating their own learning
- Align instructional practices with students' prior knowledge and cognitive ability
- Prompt students with open-ended, provoking questions during in-class discussions or online-threaded discussions
- Require students to make presentations during class or online
- Require students to work with other students either in- or out-of-class on projects or presentations; explicit mechanism in place to evaluate team skills and contributions of each student to final project
- Using a variety of teaching techniques including games, debates, skits, films, experiments, role playing, stories and higher order thinking activities (may supplement rather than replace lecture)
- Require multiple drafts of written papers and assignments (e.g. sequence of assignments that build to a final large project and provide feedback so students can improve work)
- Syllabus describes required activities in which students mentor, tutor or teach other students (e.g. a peer review as a required activity/assignment associated with a written paper)
- Work with students on research projects or other activities outside of course or programme requirements
- Syllabus includes a study abroad or travel component (e.g. class travels to other locations as a group)
- Syllabus describes expectations for an independent study
- Syllabus describes a community-based project, community service or volunteer work as a graded assignment
- Syllabus includes attendance or participation in one or more cultural performances (lectures, theatre, concerts, museum shows.) as a graded element
- Include diverse perspectives (different races, religions, genders, political beliefs, etc.) in class discussions and written assignments

Scoring criteria (2011)**Evidence absent**

- 100% lecture-oriented class
- Lecture from the assigned text only

Minimal evidence of student engagement

- Recommend students form study groups
- Assign group projects with no form of peer evaluation included
- Rote homework assignments (busy work)
- Suggest that students mentor, tutor or teach other students
- Multiple paper assignments (practice at writing) but assignments are not clearly cumulative

Evidence of high-impact student engagement

- Use incentive to reinforce formation of study groups. Provide guidelines for team skills or use formal exercises, activities or assignments to develop team skills (e.g. create a set of team roles and rules)
- Assign group projects that are graded based on final product and peer evaluation (include rubric)
- Encourage students to attend or become involved in cultural performances (Mechanism in course for earning extra credit for this or making this a graded/required component of the course)
- Incorporate multiple teaching techniques with lecture (games, debates, skits, films) (These are described on the syllabus)
- Multiple papers that build to completion of a larger project
- Paper assignment includes a formal peer review activity before students submit the final draft of the paper for evaluation

(Continued)

High-impact pedagogical practices (2013 rubric)

Graded participation in class discussions (significant)

Flipped class preparation: Connect what students read, or prepared in advance, to course content (evaluated prior work to ensure it is completed)

Work with other students on projects **during class**

Work with classmate **outside of class** on assignments

Make a class presentation

Prepare two or more drafts of a paper or assignment

Serious conversations with 'different' others

Apply learning to real-world problems or experiences

Integrate ideas and reflect on how and what students are learning

Participate in campus event, speaker or activity **related to course**

Connect with a learning support service or resource (required)

Participate in a community-based project as part of the course

Small-scale experience or introduction to a high-impact practice (undergraduate research, service learning, study abroad, internship)

assigned calibration sample during independent scoring; each pair of reviewers scored 6–12 syllabi each week. During calibration meetings, reviewers and researchers discussed the inter-rater agreement data for the calibration sample that week. The group discussed any rubric element that fell below 75% agreement (based on pair-wise readings of syllabi). Reviewers amended rubric guidelines with notes about difficult decisions to build and maintain consensus for future decisions. Weekly pair-wise percent agreement scores improved across the data collection period. Based on the full calibration sample ($n = 110$), average pair-wise inter-rater agreement across all rubric elements was 95%. Pair-wise inter-rater agreement exceeded 75% on all individual rubric elements, and pair-wise agreement on individual rubric elements ranged between 88 and 100%.

Results and discussion

Measures constructed for the syllabus review addressed several assessment questions. The measures collected in every review evaluated the level of compliance with expectations set by university policy and accreditation standards for the content of course syllabi. For example, all syllabi must be posted on the university web site and syllabi must include course SLOs written in measurable language. Level of compliance with institutional policies concerning syllabus content was evaluated by computing the percentage of posted syllabi that included each of the individual required components. The four syllabus reviews used a common set of rubric elements (new elements appeared in later reviews when new policies were implemented). Comparisons across years are based on scores for individual rubric elements, which remain consistent across reviews, and later reviews included macroscopic measures of syllabus quality based on the number of required syllabus elements included in posted syllabi, the number of recommended 'best practice' components included on course syllabi, and syllabus content that described an instructor's intent to use active learning or other engaging teaching strategies in the course.

Table 3 describes the improvements observed in four measures of syllabus quality across the four reviews. Although the overall rubric for reviews varied from year

Table 3. Changes in four syllabus characteristics across four syllabus reviews (2008–2013).

Syllabus characteristic evaluated	Year				χ^2 (3)	<i>p</i>
	(<i>n</i> = 161)	(<i>n</i> = 253)	(<i>n</i> = 346)	(<i>n</i> = 1153)		
	2008	2010	2011	2013		
Syllabus is posted to the web as required	74.5% 161/216	97.7% 253/259	99.7% 346/347	99% 1142/1153	328.41	<.005
Syllabus includes course student learning outcomes	77.3% 167/216	65.2% 165/253	82.7% 286/346	91.6% 1056/1153	127.26	<.005
Student learning outcomes are written in measurable language	65.2% 141/216	53% 134/253	81.8% 283/346	90.4% 1042/1153	227.54	<.005
Evidence of instructional strategies that promote active learning and student engagement	49.1% 79/161	92.5% 234/253	89.3% 309/346	72.1% 831/1153 61%* 703/1153	144.88	<.005

*Computed with a lenient criterion (including graded class participation, 72.1%) and with a strict criterion (excluding graded class participation, 61%).

to year, adding and omitting rubric components related to specific research questions, the measures reported in Table 2 are based on selected rubric elements that were used consistently across the four reviews. Compliance with posting syllabi to the web improved across reviews. Nearly all instructors posted their syllabi to the public website in 2013 (99%), whereas only 74.5% of syllabi were posted for course sections included in the 2008 review. More faculty identified course SLOs on their syllabus in 2013 (91.6%) than in the 2008 review (77.3%). Faculty were more likely to write course SLOs in measurable language in 2013 (90.4%) than in the 2008 review (65.2%). The one measure that varied most across the four reviews was the assessment of the use of active learning strategies. The evidence used to determine that a syllabus described active learning, student engagement and/or use of HIPP's became more rigorous with each review, with improved inter-rater reliability for judgements based on refined criteria. Early reviews used a single holistic rubric whereas later reviews used an aggregated score based on several discrete elements used as defining features in the holistic rubric. Even in the face of more rigorous criteria, the reviews indicate that faculty were more likely to describe instructional strategies that promote active learning and student engagement in their syllabi in 2013 (72.1% described one or more HIPP's) than in the first review (49.1% of syllabi provided evidence for active learning and student engagement). All of these contrasts were statistically reliable (results of χ^2 analyses and *p* values for each comparison appear in Table 2).

Compliance with university expectations and policy for syllabus content

The 2011 review identified 18 required syllabus components (two components were required only for selected classes). The syllabi posted to the web and available for review ($n = 346$) included an average of 13.3 (SD = 2.606) of the 18 required syllabus components (two components were required only for selected classes); three syllabi (.9%) included only three required components; 61 syllabi (17.6%) included all 16 required components; 80 syllabi (23.1%) included the modal number (14) of required components.

The 2013 rubric identified 23 required syllabus components (2 components were required only for selected classes; 4 components described optional ways to meet a required component). Reviewed syllabi ($n = 1142$) included an average of 18 required components (SD = 3.57; Mode = 20); 80.7% of syllabi included 17 or more of the required components. Although the number of components might seem to present an onerous demand on syllabus content, most elements can be addressed with a few words or a line of text. The most frequent page length of syllabi included in the 2013 calibration sample was four, five or six pages (three modes). The average page length was 6.5 pages; syllabi ranged from 2 to 18 pages.

In the 2013 review, the compliance rate for including individual syllabus components exceeded 90% on 10 of the 19 required syllabus components, compared to only 6 of 18 required components in the 2011 review. Compliance on the remaining seven elements (excluding the two components required only for selected types of courses) ranged from a low of 34.8% (statement about course continuity in the event of an emergency) to 87.5% (statement about assistance for students with special needs). In comparison, in the 2011 review, compliance on remaining elements ranged from a low of 31.5% (course continuity statement) to 85.5 (statement of the university academic conduct policy/plagiarism policy).

Evidence for 'best practices' in syllabus construction

Analysis of 'best practice' elements indicated that instructors varied widely in including these elements on course syllabi. The most common 'best practices' observed on syllabi were descriptions of instructor-established policies for the course (instructor rules about late work, permission to make up a missed examination, and classroom behaviour such as use of laptops and cell phones were present on 88.5% of syllabi), class meeting time and location (63.8%), articulation of expectations for classroom decorum or civility (53.3%), instructor goals for the course or a description of the role of the course in the curriculum or as preparation for future courses (48.9%), description of software or other required technology skills (46%) and detailed descriptions of specific projects (43.3%). Instructors seldom referred to a grading rubric for assignments (8.9%) or included a grading rubric in the syllabus (7.7%).

Evidence for instructor use of HIPPs

The rubric for evaluating the use of HIPPs included the 13 HIPPs identified by the NSSE and the AAC&U. Among the HIPPs included in the rubric was the use of a 'flipped class' structure. In contrast to conventional course structures that typically present disciplinary content in class through lectures and assign homework that requires students to apply skills outside the classroom, a 'flipped' or inverted class

structure places the first exposure to disciplinary content outside the class as preparatory homework. Pre-exposure to content, which may include access to pre-recorded lectures, readings and other learning materials, prepares students to engage in activities and apply skills during class time under the guidance of the instructor (e.g. Lage, Platt, and Treglia 2000; Strayer 2012). The active learning and immediate in-class instructor feedback promote deep and enduring learning. The rubric also included graded class participation as a HIPP, because graded class participation can be a powerful pedagogical practice when it is combined with active learning strategies that depend on participation. However, some might question whether graded class participation always represents a true HIPP (e.g. when the participation grade is a surrogate for an attendance grade). For this reason, a second analysis excluded class participation as a HIPP.

Overall, the analysis of the syllabi identified 831 syllabi (72%) that described one or more of the 13 HIPPs. Many courses did show evidence of graded participation in class discussions ($n = 586$; 50.8% of syllabi). Even though the evidence for use of HIPPs in courses was lower when we excluded graded class participation, 705 syllabi (61% of all syllabi) still described one or more of the remaining HIPPs. The next three most frequent HIPPs were flipped class structures ($n = 366$, 31.7%), applying learning to real-world problems or experiences ($n = 271$, 23.5%) and making class presentations ($n = 268$, 23.2%).

Alignment with information literacy standards

SLOs that aligned with information literacy standards appeared on 58.5% of the syllabi (674 syllabi described one or more course SLOs that aligned with one or more ACRL information literacy standards). In addition, 683 (59.2%) of the syllabi identified an assignment that aligned with an information literacy SLO (regardless of whether the instructor described an information literacy SLO on the syllabus). Descriptions of discussion threads and related forms of digital communication (web pages, wikis, blogs, etc.) appeared most often on course syllabi ($n = 310$), followed by literature review papers ($n = 266$), short papers based on an assigned reading (book reports or reviews, journal summaries, analyses, critiques; $n = 183$) and class presentations using presentation software or written handouts ($n = 159$).

The finding that digital communication was the most frequent assignment described on syllabi was a surprise; however, threaded discussions are frequently advocated as a means for building community in an online class, and nearly 27% of the course syllabi reviewed were for fully online courses. An analysis of the information literacy assignments, disaggregated by mode of delivery, indicated that the majority of the digital communication assignments appeared on syllabi for online courses (68.8% of online courses described a digital communication assignment; 18.6% of all courses combined), whereas digital communication assignments appeared less frequently on syllabi for face-to-face (F2F) courses (11.4% of F2F courses; 8.3% of all courses combined).

Online classes described few assignments related to information literacy. The most common information literacy assignments (after digital communication) for online courses were literature reviews (17.4% of online syllabi; 4.7% of all syllabi), book reports or reviews (15.1% of online syllabi; 4.1% of all syllabi) and case analyses/studies (12.9% of online syllabi; 3.5% of all syllabi). In contrast, F2F classes described information literacy assignments more frequently. The most common F2F

information literacy assignment was a literature review (without data collection: 25.2% of F2F syllabi; 18.4% of all syllabi) and the next most common information literacy assignments were book reports or reviews (16.2% of F2F syllabi; 11.8% of all syllabi) and class presentations with PowerPoint and/or a handout (15.7% of F2F syllabi; 11.45% of all syllabi).

Alignment with twenty-first century skills

Instructors described twenty-first century and professional skills SLOs on 811 syllabi (70.3%), although only 456 syllabi (39.5%) identified an assignment that aligned with one or more of these SLOs. Team-based projects were described most often on course syllabi ($n = 171$), followed by consultations or service to an outside organisation ($n = 122$), and work-related planning projects such as creating a marketing, project or technology implementation plan ($n = 116$).

Syllabus content revealed an interesting disconnect between instructor goals and course design, with a different pattern for the two categories of learning outcomes. Many instructors claimed to support twenty-first century skills in courses by describing SLOs on a syllabus, but few described concrete activities and assignments that would develop these skills. Thus, the promise to develop student learning articulated in the SLOs was not supported by the descriptions of learning activities in the syllabus. In contrast, although instructors seldom described information literacy skills in course syllabi, they frequently described learning activities that promote information literacy skills. The magnitude of this gap is surprisingly large; the number of courses that described assignments aligned with twenty-first century skills was more than 30% lower than the number of courses that described SLOs aligned with twenty-first century and professional skills SLOs for 18 departments.

These observations reveal two different areas for potential course improvement. Instructors who articulate twenty-first century skills SLOs for a course might consider adding specific activities that will create opportunities for students to practice and develop these skills. Similarly, courses that currently include information literacy activities and assignments might be improved by articulating an SLO for information literacy. Although these courses implicitly support information literacy, student learning might benefit when instructors make the connection between course assignments and information literacy SLOs explicit.

Closing comments

On first consideration, the prospect of evaluating the content of a large sample of syllabi is a daunting task. However, a syllabus review can generate a rich data-set that answers multiple focused questions about the nature of teaching and learning. The syllabus review demonstrates that careful attention to reviewer training can provide accurate and reliable descriptions of the quality of course syllabi. The 2013 review documented two aspects of the teaching culture on campus: the degree to which course syllabi reflect learning-centred course design strategies and evidence for the use of active, engaging instructional strategies (HIPPs) in undergraduate courses. The review documented the campus commitment to learning outcomes aligned with standards for information literacy and twenty-first century skills. Reviewers determined the number of syllabi that described each type of learning outcome, and identified course syllabi that described graded assignments that aligned

with each type of learning outcome. The review also generated inventories of courses aligned with each type of learning outcome, and courses that described assignments that support these learning outcomes.

An analysis of syllabus content that examines only one component of the syllabus (e.g. the list of SLOs) is an imperfect window on how an instructor teaches, as illustrated in the findings we report. For example, some instructors described SLOs that were unrelated to the instructional activities they described in the syllabus (as we observed for twenty-first century skills SLOs). Some instructors described assignments and learning activities in syllabi that probably support acquisition of skills (e.g. professional writing skills) that are not articulated as SLOs in the syllabus. We can be most confident that the course structure described in a syllabus reflects actual learning activities when instructors describe a written assignment or required project/activity, describe how the assignment contributes to a final grade and articulate an SLO that aligns with the required activity. When these conditions are met, it is highly likely that syllabus content accurately describes the learning outcomes and instructional strategies the instructor uses in the course. However, syllabus content will be silent on how well an instructor uses an instructional strategy, which depends on data from assessments of student learning. An analysis of discrepancies between SLOs and learning activities described on syllabi suggests areas needing further exploration to determine the true nature of learning in the course. A future study might examine the disparities between syllabus content and course implementation, as documented by class observations, focus groups of enrolled students, or analysis of the content of formal student grade appeals and grievances.

These findings can guide the future actions of Centres for Teaching and Learning and librarians. For example, Centres for Teaching and Learning can develop workshops and consultations with faculty to develop skills in creating and facilitating HIPPs and encourage the adoption of HIPPs in courses. In addition, faculty developers can advocate for including SLOs that align with twenty-first century skills as well as describing SLOs for disciplinary content. Periodic syllabus reviews can help faculty developers evaluate the success of these efforts. The inventories developed during the review identify departments that communicate a commitment to promoting information literacy in course syllabus content. Reference librarians can cultivate collaborations with these departments and individual faculty (e.g. Travis 2011). These collaborations include opportunities to develop library web resources, face-to-face tutorials and workshops designed to help students develop skills needed to complete information literacy assignments and achieve information literacy learning outcomes identified for course syllabi.

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**State Licensure Exam-December 2017 Manikin
Curriculum Integrated Format (CIF) Failures**

<u>Endo</u>	<u>Pros</u>	
x		Posterior endo: any part of the tooth is perforated
	x	Ceramic: cervical margin is cupped or J-shaped/Cast metal: taper is grossly over-reduced
	x	Ceramic: margin is cupped or J-shaped
x		Access opening: Placement is not over pulp chamber
x		Access opening: access size is too small
x		Tx mgment: internal form
	x	Ceramic: cervical margin is cupped or J-shaped/PFM: cervical margin is cupped or J-shaped
	x	Cast metal: cervical margin is cupped or J-shaped
	x	ceramic: axial/lingual reduction <0.5mm/incisal reduction<1.0mm
	x	PFM: occulsal reduction <0.5mm
	x	PFM: occulsal reduction <0.5mm
4	7	

Fall 2 procedures on manikin (Endo, Pros), Spring 3 procedures on patient (Perio, 2 Operative)

Not a DMD degree requirement

3 attempts then wait for one year

Retake options: March, May, October, December