Describing Instructional Practice and Climate: Two New Instruments

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Identification of Challenge

Most faculty have knowledge of evidence-based instructional practices and access to the resources to carry them out. Despite this, efforts to transform postsecondary instruction have met with only modest success (e.g., American Association for the Advancement of Science [AAAS], 2013). Institutional environments and structures may be one of the underlying barriers to changing instruction (Beach, Henderson, & Finkelstein, 2012; Henderson, Beach, & Finkelstein, 2011). One measure of an institutional environment is climate. Climate is a more immediately accessible and malleable construct than organizational culture, as it can be changed through policy or other administrative and organization-member actions. As such, climate is a productive conceptual frame to apply in research that attempts to inform policy and practice change initiatives (Schneider, Ehrhart, & Macey, 2013).

However, in order to measure the impact of change initiatives, it is paramount to have reliable and valid methods to measure climate and instructional practice (AAAS, 2013). The goal of this research study was to design and validate instruments that elicit (a) organizational climate for instructional improvement and (b) postsecondary instructional practices. The resulting surveys, SCII and PIPS, are reliable, interdisciplinary, and can collect data quickly from a large number of participants. In this paper, we share these research tools, explain our development and data collection processes, highlight preliminary results, and provide suggestions for use of the instruments.

Research Study

As part of a larger project on postsecondary instructional change, we have developed two instruments to elicit climate and instructional practices in higher education settings. In this section, we describe background literature, conceptual frameworks, item development, scales, and validation of our surveys. We follow with a discussion of preliminary results and implications.

Research Tool 1 – Survey of Climate for Instructional Improvement (SCII) Background

Climate can be described as either an individual (psychological) construct or as a property of an organization (Kozlowski & Klein, 2000) when individual perceptions are

aggregated to the group level and consensus can be demonstrated (Dansereau & Alluto, 1990; James, Demaree & Wolf, 1993; James & Jones, 1974; Kozlowski & Hults, 1987). Since our

research project focused on the influence of climate on postsecondary instructional practices, we chose to explore the institutional environment through the lens of organizational climate. This choice limits potentially idiosyncratic data and explores different questions than the work relating teaching practices and self-efficacy (e.g., Tschannen-Moran & Johnson, 2011).

Organizational climate is defined as the shared perceptions of organization members about elements of the organization. These elements influence individual attitudes and behaviors and include patterns of relationships, atmosphere, and organizational structures (Peterson & Spencer, 1990; Schneider, 1975, Schneider & Reichers, 1983; Schneider et al., 2013). Climate can operate on many different organizational levels (Kozlowski & Klein, 2000) and therefore is most useful when focused on a specific outcome – i.e. climate for something (Schneider, 1975). In our case, we were interested in climate for instructional improvement, which we define as the action or process of making changes in teaching with the goal of achieving the best possible learning outcomes. This change-making process includes the introduction or continued use of evidence-based instructional strategies, technologies, and/or curriculum.

Conceptual Framework

We first examined the literature for theoretical and conceptual frameworks from which to develop the climate survey. The framework of faculty work elements identified by Gappa, Austin, and Trice (2007) was eventually chosen for its alignment with the aspects of climate that we were interested in. This framework consists of three aspects of faculty work experience (academic freedom and autonomy, collegiality, professional growth) and three characteristics of academic organizations (resources, rewards, leadership). An important strength of this framework for our purposes was that it aligned with related literature on workplace 'climate for change' (Bouckenooghe, Devos, & Van den Broeck, 2009), the nature of academic work and workplaces (Massy, Wilger, & Colbeck, 1994), departmental teaching climate (Beach, 2002; Knorek, 2012), and leadership for teaching (Ramsden, Prosser, Trigwell, & Martin, 2007).

We identified seven components of climate for instructional improvement that could potentially be measured through survey by combining the Gappa et al. framework with related literature (Table 1). These seven components include: resources (Beach, 2002; Gappa et al., 2007, Knorek, 2012), rewards (Beach, 2002; Gappa et al., 2007; Knorek, 2012), professional development (Beach, 2002; Gappa et al., 2007), leadership (Beach, 2002; Bouckenooghe et al., 2009; Gappa et al., 2007; Ramsden et al., 2007), collegiality (Beach, 2002; Gappa et al., 2007; Massy et al., 1994), academic freedom and autonomy (Gappa et al., 2007), and general attitudes

about students and teaching (Beach, 2002; Ramsden et al., 2007).

Item Development

Items for the SCII were developed based on existing surveys when possible (Bouckenooghe et al., 2009; Hurtado, Eagan, Pryor, Whang, & Tran, 2011; Knorek, 2012; Ramsden et al., 2007) and self-generated when necessary. We sought to refer to group rather than individual perceptions as items were generated and revised, so that organization-level perceptions were properly represented (Glick, 1985). This approach involved changing the

referent of existing items from the individual to the organizational level (e.g., "the instructors in my department think" rather than "I think"). We also revised existing items to refer to "instructors" instead of "faculty" and changed terms like "tenure" to "continued employment," since full-time, part-time, graduate student instructors were surveyed.

Table 1. Operational definitions and sources of organizational climate components used to develop items on the SCII.

Component	Definition	Concept Definition Source
Rewards	Recognition of teaching excellence through awards or job security measures.	improvement, including funding, office space, equipment, and support services. Beach, 2002 Knorek, 2012 Gappa et al., 2007 (modified)
Resources	Tools necessary for instructional	Gappa et al., 2007
Professional Development Opportunities	that enable instructors to broaden their knowledge, abilities, and skills to address challenges,	concerns, and needs, and to find deeper satisfaction in their work. Gappa et al., 2007 Beach, 2002 Knorek, 2012 Gappa et al., 2007, p. 280
Collegiality	Opportunities for instructors to feel they belong to a mutually	respectful community of colleagues who value their contributions, and to feel concern for their colleagues' well being. Massy et al., 1994 Gappa et al., 2007 Bouckenooghe et al., 2009 Gappa et al., 2007, p. 305

	and Autonomy	interference,	Gappa et al., 2007
	Right of all instructors to teach without undue institutional	including freedom in course content and instructional practices.	Gappa et al., 2007, p. 140-141 (modified)
Academic Freedom			
	the department that communicate the value of teaching and instructional improvement.		Beach, 2002 Bouckenooghe et al., 2009 Self generated
Leadership Policies, actions, or expectations established by the formal leader of			
	Students and Teaching	characteristics and	Beach, 2002
	Shared perceptions of the individuals in a department regarding student	instructional practices that may influence improvements in teaching.	Ramsden et al., 2007 Hurtado et al., 2011 Self-generated
Shared perceptions about			

Scale. We purposefully chose a 6-point Likert style scale for SCII that uses the following response options: strongly agree, agree, somewhat agree, somewhat disagree, disagree and strongly disagree. Six point agree-disagree scales are considered preferable to 4-point scales, as they generate better variance (Bass, Cascio, & O'Connor, 1974). There is no neutral point on the scale, as forcing agreement or disagreement avoids an increase in participants claiming 'no opinion' when they actually have one (Bishop, 1987; Johns, 2005).

Research Tool 2 - Postsecondary Instructional Practices Survey (PIPS) Background

There are multiple ways to measure the teaching practices of postsecondary instructors, including self-report surveys and observational protocols. We see surveys as a preferable method, since observational protocols (e.g. RTOP, Piburn, Sawada, Falconer, Turley, Benford, & Bloom, 2000; TDOP, Hora, Oleson, & Ferrare, 2012) require training and expertise, are expensive and difficult to implement at scale, and risk reliability issues.

Although 10 surveys of instructional practices were summarized in a recent AAAS report (AAAS, 2013), none were designed to elicit teaching practices (and only teaching practices) from an interdisciplinary group of postsecondary instructors. Most existing instruments are designed for use in a particular discipline: physics and

engineering (Borrego, Cutler, Prince, Henderson, & Froyd, 2013; Brawner, Felder, Allen, & Brent, 2002; Dancy & Henderson, 2010), chemistry and biology (Marbach-Ad-Ad, Schaefer-Zimmer, Orgler, Benson, & Thompson, 2012), geosciences (MacDonald, Manduca, Mogk, & Tewksbury, 2005), or statistics (Zieffler, Park, Garfield, delMas, & Bjornsdottir, 2012). Other instruments elicit teaching beliefs or goals for student learning, and not actual teaching practice (e.g., ATI; Trigwell & Prosser, 2004). The remaining surveys are interdisciplinary and elicit teaching practices, but elicit a very wide range of faculty practices beyond teaching. These include the FSSE (Center for Postsecondary Research, 2012), HERI (Hurtado, Eagan, Pryor, Whang, & Tran, 2011), and NSOPF (National Center for Educational Statistics, 2004). Two of these are only available on a proprietary basis (NSOPF, HERI).

Seeking an interdisciplinary, non-proprietary, and succinct survey of postsecondary instructional practices, we designed a new instrument. The resulting survey, PIPS, is designed to be easy-to-use, non-evaluative, and collect data quickly from a large number of participants.

Conceptual Framework

In absence of an appropriate instrument, we turned to the empirical and theoretical literature about teaching. There is no conceptual model of instructional practice despite excellent literature reviews describing research on instructional practices (e.g., Pascarella & Terenezini, 1991; 2005). Without a model from which to develop instructional practice items, we shaped the dimensions of our instrument by finding themes among (a) developed instruments, (b) teaching observation protocols and (c) patterns in research on instructional practice. We compiled 153 items by combining all available questions and literature patterns from two published instruments (FSSE, ATI), two observational protocols (RTOP, TDOP), and comprehensive

literature reviews (Iverson, 2011; Meltzer & Thornton, 2012; Pascarella & Terenezini, 1991; 2005).

From an initial set of 153 questions, we reduced the number of questions by removing redundant items, items that did not refer to actual teaching practices (i.e., items that elicited beliefs about teaching or intent to teach in a given manner), and lists of generalized practices (e.g., “lecture”, “lecture with demonstration”, “multiple choice tests”). The final set of 24 items was categorized into 4 components (Table 2), revised for clarity and to reduce the potential of eliciting socially acceptable responses.

Table 2. Operational definitions and sources of instructional practice concepts used to develop items on the PIPS.

Component	Definition	Definition Source
Instructor-Student		

interactions	Practices that influence the classroom relationship between the instructor and students (e.g., the role of the instructor in class sessions).	feedback to students and the instructor on what, how much, and how well students are learning (Angelo & Cross, 1993). Assessment practices include what is assessed, how often students are assessed, how instructors use assessment data, and grading.
Student-content interactions	Practices that influence how students interact with course concepts (e.g., reflection activities, connecting concepts to students' lives).	Self-generated Self-generated
Student-student interactions	Practices that influence the classroom interactions among students. These approaches include classroom discourse, small group work, and other collaborative approaches.	Self-generated Angelo and Cross, 1993, p. 4 (modified)
Assessment	Practices that provide	

Intended Context. PIPS items are designed for respondents to describe teaching the largest enrollment, lowest level course they have taught in the last two years. We believe this setting is one of the most challenging in which to use evidence-based instructional strategies in comparison to smaller enrollment, higher level courses. This setting is also of most concern to researchers and others involved with instructional change (AAAS, 2013).

Scale. PIPS uses a 5-point Likert scale as recommended by Bass, Cascio, & O'Conner, (1974), with options including: not at all descriptive, minimally descriptive, somewhat descriptive, mostly descriptive and very descriptive of my teaching. There is no neutral point on the scale in order to generate more variability in the data (Bishop, 1987; Johns, 2005).

Field Testing

The instruments in their entirety were field tested with individual instructors and a panel of experts from multiple institutions prior to piloting the survey. This process allowed for items to be evaluated for clarity and revised. New items were added,

several were removed, and the structure and definition of each component was further developed. The pilot version of SCII had 52 items and the pilot version of PIPS had 24 items (see Appendix). The number of items was reduced as we completed our validation process through confirmatory and exploratory factor analyses (see Analyses).

Implementation

We collected pilot data from 889 postsecondary instructors at four institutions in the United States (Table 3). Two of these institutions (A and B) completed both PIPS and SCII, and the other institutions completed only PIPS (C and D).

Table 3. Demographic and sample size information for the surveyed institutions.

	Institution A	Institution B	Institution C	Institution D
N	214	164	87	424
Departments Surveyed	13	9	10	40
Data Sources	PIPS; SCII	PIPS; SCII	PIPS	PIPS
Disciplines	STEM and Applied sciences			STEM Biological Sciences All Departments
Instructors	Surveyed Full- and Part-time faculty		Full- and part time faculty Full-time faculty	only Full- and Part-time faculty
U.S. Region	Great Lakes	Mid-Atlantic	South Atlantic	Mountain West
Control	Public	Public	Public	Public
Carnegie Classification	High research activity Research university; Very high research activity			Masters College or University (larger program)
Student Population	25K	28K	34K	22K

Analyses

Analysis followed Floyd and Widaman's (1995) recommendations for instrument development and refinement. We first ran exploratory factor analyses (EFA) using maximum likelihood extraction with Promax rotation to identify dimensions of climate and teaching practice. We made note of items that consistently loaded together across institutions, since instructional practices and climate had the potential to manifest differently at different institutions.

We subsequently ran confirmatory factor analyses (CFA) using SPSS AMOS 22.0 to create structural equation models based on our apriori categorization of the items and the results of the exploratory factor analyses. We refined the models based on item modification indexes and regression loadings produced by AMOS to reach an acceptable chi-squared/df value below 5.0, a CFI near 0.90, and RMSEA below 0.10 (Byrne, 2013).

Using the SCII and PIPS constructs that emerged from the modeling process, we created individual construct scores by adding the sum of the items in each construct. Construct scores were generated only if a participant completed all of the items contributing to the construct. We lastly ran statistical comparisons among mean construct scores for each institution and among departments within an institution.

Results

This section includes instrument reliability scores, a list of the constructs for each instrument, and select differences in institutional and department construct means. We do not include all findings to meet length requirements.

Reliability and Construct Structure

The current version of SCII has 26 items (6 constructs) and PIPS has 20 items (5 constructs) (see Appendix). Both instruments have high internal reliability ($\alpha > 0.8$) and could not be improved with removal of additional items (Table 4).

Climate for Instructional Improvement Means by Institution and Department

Climate for instruction improvement as elicited by SCII factored into 6 distinct constructs in our EFA and CFA analyses. In the order of their contribution to overall variance (Table 5), the constructs include leadership (6 items), collegiality (6 items), resources (3 items), professional development (PD, 3 items), autonomy (3 items), and respect (5 items) (see Appendix).

Climate construct means significantly differed between Institutions A and B for each construct ($p < .0001$), with the exception of professional development ($p = 0.944$, Table 5). Climate means also significantly differed among departments within each institution. However, these differences were rarely significant in post-hoc comparisons. One notable exception is the significant difference in the mean leadership scores between the Mathematics department and Industrial and Manufacturing Engineering department at Institution A (Figure 1).

Table 4. Reliability statistics for the current versions of the Survey of Climate Instructional Improvement (SCII) survey and the Postsecondary Instructional Practices Survey (PIPS)

	Survey of Climate for Instructional Improvement (SCII)	Postsecondary Instructional Practices Survey (PIPS)
Number of Items	26	20
Constructs	6	5
N	300	661
Reliability (α)	0.943	0.812

Significant differences in climate means by institution are detailed in Table 5. We also present a graph of departmental means for one of the constructs that shows instructional clusters of department means (Figure 1). In this case, we chose a plot of the leadership construct as it contributed most to overall variance (44.51% for this sample).

Table 5. Survey of Climate for Instructional Improvement (SCII) mean scores by construct and institution.

	Leadership	Collegiality	Resources	PD	Autonomy	Respect
# Items	6	6	3	3	3	5
Institution A	2.65 (0.99)	2.97 (0.92)	3.08 (1.01)	3.74 (1.06)	2.75 (0.87)	2.69 (1.01) M (SD)
Institution B	4.05 (0.97)	4.03 (0.95)	4.19 (0.98)	3.75 (0.94)	4.14 (0.67)	4.25 (0.91) M (SD)
t-test p-value	****	****	****	0.944	****	**** Note. **** = p < .0001

Instructional Practices by Institution and Department

Instructional practices factored into five distinct constructs by our EFA and CFA analyses. In the order of their contribution to overall variance (Table 6), the constructs include: instructor-student interactions (4 items), student-student interactions (4 items), student-content interactions, formative assessment (4 items), and summative assessment (4 items). PIPS items organized by construct are provided in the Appendix.

The instructional practice construct means significantly differed among Institutions A, B, C and D for each construct ($p < .01$, Table 6). Instructional practice means also significantly differed among departments within each institution. However, these differences were rarely significant in post-hoc comparisons. One notable exception is a significant difference in the mean leadership scores between the Mathematics department and Industrial and Manufacturing Engineering department at Institution A (Figure 1).

Significant differences in climate means by institution are detailed in Table 5. We also present a figure that displays institutional clusters for mean department teaching practice scores (Figure 2). As with the climate constructs by department, we chose to create the figure for construct that contributed most to overall variance (student-student interactions, 22.83% for this sample).

Figure 1. Mean leadership scores by department and institution as collected by the Survey of Climate for Instructional Improvement (SCII). Departments are listed in order of lowest to highest mean leadership score.

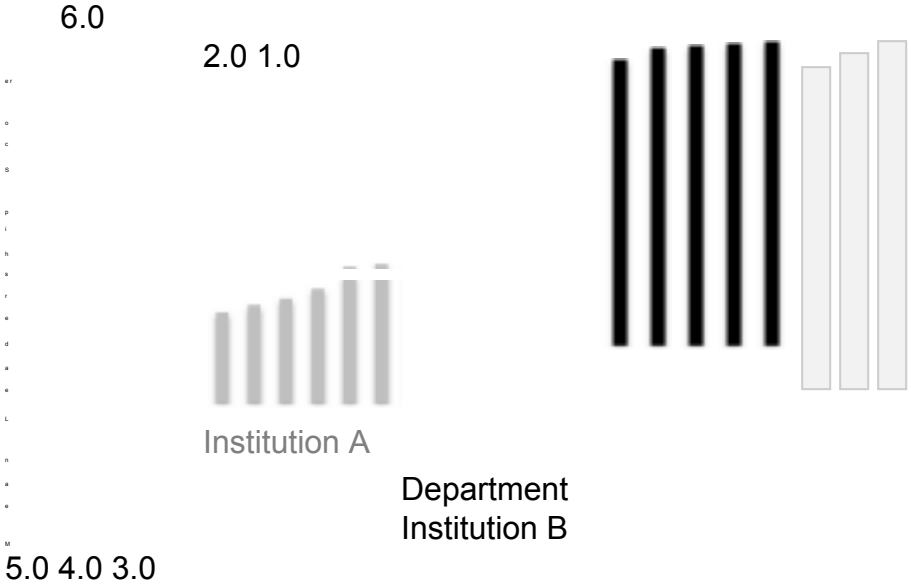
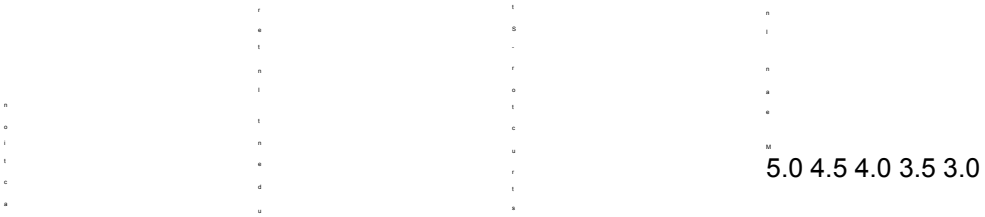


Table 6. Postsecondary Instructional Practices Survey (PIPS) mean scores by construct and institution.

	Instructor Student Interactions	Student Student Interactions	Student Content Interactions	Formative Assessment	Summative Assessment
# Items	4	4	4	4	4
Institution A M (SD)	3.97 (0.79)	2.02 (0.84)	3.68 (0.82) [a]	3.39 (0.75)[c]	3.53 (0.65)[d]
Institution B M (SD)	3.13 (0.95)	1.84 (0.85) [a]	3.28 (0.74)[c]	3.84 (0.67)[b]	3.83 (0.71)[b]
Institution C M (SD)	3.50 (0.90)	2.22 (0.97)	3.40 (1.12) [d]	3.08 (1.11)[c]	3.53 (0.81)[e]
Institution D M (SD)	3.45 (0.82)[d]	2.56 (0.77)[b]	3.86 (0.68)[b]	3.77 (0.85)[b]	3.10 (0.85)[a]

Note. [a] Significantly different than the other 3 institutions ($p < .05$), [b] Significantly higher ($p < .05$) than the 2 lowest scoring institutions, [c] Significantly lower ($p < .05$) than the 2 highest scoring institutions, [d] Significantly different ($p < .05$) than the lowest and highest scoring institution, [e] Significantly higher ($p < .05$) than the lowest scoring institution.

Figure 2. Mean instructor-student interactions scores by department and institution as collected by the Postsecondary Instructional Practices Survey (PIPS).



Lessons Learned and Transferability

Understanding and measuring differences in climate and teaching practices in higher education settings enables users to identify levers for improving teaching, thereby better planning future change initiatives. Our research documents support for instruments that can differentiate among elements of climate and instructional practices of postsecondary instructors. The instruments are reliable, easy-to-use, and can quickly collect data from a large number of participants. Furthermore, the instruments are designed modularly so that they can be used together or separately to understand the current situation and/or document changes over time through repeated measurements.

Unique Features of our Instruments

Although at least 10 surveys of instructional practices (AAAS, 2013) are available, none are designed to elicit teaching practices (and only teaching practices) from an interdisciplinary group of postsecondary instructors. The survey is also non-evaluative, designed for respondents to score practices as descriptive of their teaching without judging the quality of these practices. Furthermore, PIPS is concise (20 items), non-proprietary, and designed with clear and consistent item scales.

The SCII is unlike any other instrument available. Although other instruments elicit different elements of climate including organizational climate for change (Bouckenoghe et al., 2009) and faculty teaching climate (particularly rewards and resources; Knorek, 2012), SCII is built in alignment with the essential elements of faculty work described by Gappa et al. (2007). Our results not only provide empirical support for the factors described by Gappa et al. (2007), but it also elicits constructs that could serve as levers for change in planned initiatives.

Identifying Differences with SCII and PIPS

Although not presented in this paper, our findings align with those identified with other instruments. Practices in the instructor-student interaction construct were more descriptive of male instructors than female instructors. This construct includes practices such as “students sitting and taking notes” and “teaching with the assumption that students have little incoming knowledge.” Henderson, Dancy, and Niewiadomska-Bugaj

(2012) and Kuh, Laird, and Umbach, (2004) likewise found women using fewer instructional practices of this nature. We also found rank-based differences in teaching practices and in perceptions of department climate similar to those in the literature. For example, part-time instructors reported less flexibility in their teaching methods and fewer teaching resources than their tenure-track counterparts (e.g. Gappa & Leslie, 1993). Graduate students were also less likely to claim assessment practices (both formative and summative) were descriptive of their teaching, perhaps due to a lack of autonomy to develop these assessment practices.

Unique to our study are institutional clusters in teaching practices and organizational climate for instructional improvement (e.g. Figure 1). These clusters may indicate that some elements are more normative at the institution level than the department level, with the exception

of certain disciplines. Institution A, which is less research intensive than Institutions B and C by Carnegie classification, reported using more instructor-student interactions. We also found a significant negative correlation ($p<0.01$) between traditional teaching practices and evidence based teaching practices, which supports the logical argument that use of one relates to less use of the other.

Future Work

One of our next steps will be completing hierarchical linear models to understand the sources of variance within the data. This will identify contributions to variance at levels higher than the individual, including department and institution-level variance.

We will also be triangulating the results of our instructional practices survey with teaching observation data (collected using the TDOP) and interviews with instructors. These observations will provide additional support for our constructs and help gain further insight into their organizational climate and undergraduate instructional practices.

Access to the Instruments

The instruments are available with the online at: http://homepages.wmich.edu/~chenders/Publications/2014WalterTwoInstruments.pdf If you use the instruments, we request that you use them in their entirety and share the data with our research team for further refinement of the instruments.

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Survey of Climate for Instructional Improvement (SCII)

INFORMATION

This survey was designed by researchers at Western Michigan University to collect data about the climate for teaching improvement within academic departments.

ITEMS BY CONSTRUCT

Leadership

C29. The department chair has a clear vision of how to improve teaching in the department. C30. The department chair implements teaching-related policies in a consistent and transparent manner. C31. The department chair inspires respect for his/her ability as a teacher.

C32. The department chair is receptive to ideas about how to improve teaching in the department. C33. The department chair is tolerant of fluctuations in student evaluations when instructors are trying to improve their teaching.

C34. The department chair is willing to seek creative solutions to budgetary constraints in order to maintain adequate support for teaching improvements.

Collegiality

C01. Instructors in my department frequently talk with one another.

C02. Instructors in my department discuss the challenges they face in the classroom with colleagues. C03. Instructors in my department share resources (ideas, materials, sources, technology, etc) about how to improve teaching with colleagues.

C04. Instructors in my department use teaching observations to improve their teaching.

C11. Instructors in my department are "ahead of the curve" when it comes to implementing innovative teaching strategies.

C27. Instructors in my department have someone they can go to for advice about teaching.

Resources

C20. Instructors in my department have adequate departmental funding to support teaching. C21. Instructors in my department have adequate space to meet with students outside of class. C22. Instructors in my department have adequate time to reflect upon and make changes to their instruction.

Professional Development

C19. Instructors in my department are assigned a mentor for advice about teaching.

C35. In my department, teaching development events (i.e. talks, workshops) are hosted specifically for Department instructors.

C36. In my department, new instructors are provided with teaching development opportunities and resources.

Autonomy

C23. Instructors in my department have considerable flexibility in the content they teach in their courses. C24. Instructors in my department have considerable flexibility in the way they teach their courses. C48. In my department, there are structured groups organized around the support and pursuit of teaching improvement.

Respect

C40. Evidence of effective teaching is valued when making decisions about continued employment and/or promotion.

C43. Differences of opinion are valued in decision-making related to teaching improvement. C44. Courses are fairly distributed among instructors.

C45. Teaching is respected as an important aspect of academic work.

C46. All of the instructors are sufficiently competent to teach effectively.

Survey of Climate for Instructional Improvement (SCII)

INFORMATION

This survey was designed by researchers at Western Michigan University to collect data about the climate for teaching improvement within academic departments.

INSTRUCTIONS
The survey consists of fifty-three statements. It should take about 15 minutes to complete. Each section of the survey has a stem phrase related to a list of statements. Please circle the number that corresponds to the degree of your agreement with each statement.

In the survey, the term "instructor" refers to anyone who teaches in the department, including full-time faculty, part-time faculty, and/or graduate students.

1 - Strongly Disagree 2 - Disagree 3 - Slightly Disagree
4 - Slightly Agree 5 - Agree 6 - Strongly Agree

Instructors In My Department…						
	1. Frequently talk with	Strongly Disagree	Disagree	Somewhat Disagree		

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
one another.	1	2	3	4	5	6
2. Discuss the challenges they face in the class room with colleagues.	1	2	3	4	5	6
3. Share resources (ideas, materials, sources, technology, etc) about how to improve teaching with colleagues.	1	2	3	4	5	6
4. Use teaching observations to improve their teaching.	1	2	3	4	5	6
5. Value teaching development services available on campus as a way to improve their teaching.	1	2	3	4	5	6
6. Feel that most students are academically well prepared.	1	2	3	4	5	6
7. Identify having a range of student talent as a barrier to improving their instruction.	1	2	3	4	5	6
8. Use traditional teaching approaches because students are most comfortable with them.	1	2	3	4	5	6
9. Aspire to become better teachers.	1	2	3	4	5	6
10. Believe that teaching improvement is part of their job.	1	2	3	4	5	6

Instructors In My Department ARE…	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
11. "Ahead of the curve" when it comes to implementing innovative teaching strategies.	1	2	3	4	5	6
12. Comfortable discussing teaching related issues with their supervisor(s).	1	2	3	4	5	6
13. NOT willing to conduct teaching observations for colleagues.	1	2	3	4	5	6
14. Satisfied with their teaching workload.	1	2	3	4	5	6

15. Satisfied with the way they currently teach. 1 2 3 4 5 6 1 2 3 4 5 6 1 2 3 4 5 6

16. Willing to align the content of their courses to improve student learning. 1 2 3 4 5 6 1 2 3 4 5 6 1 2 3 4 5 6

17. Willing to conduct teaching observations for colleagues.

18. Regularly nominated for campus teaching awards. 1 2 3 4 5 6 1 2 3 4 5 6 1 2 3 4 5 6

19. Assigned a mentor for advice about teaching.

Instructors In My Department HAVE…	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

20. Adequate departmental funding to support teaching improvement.

21. Adequate space to meet with students outside of class.

22. Adequate time to reflect upon and make changes to their instruction.

23. Considerable flexibility in the content they teach in their courses.

24. Considerable flexibility in the way they teach their courses. 1 2 3 4 5 6 1 2 3 4 5 6

25. Input on policies and decisions related to teaching.

26. The support they need to employ educational technologies in their classrooms.

27. Someone they can go to for advice about teaching. 1 2 3 4 5 6

1 2 3 4 5 6 1 2 3 4 5 6

1 2 3 4 5 6 1 2 3 4 5 6 1 2 3 4 5 6

STATEMENTS 28-34:

The following statements refer to the "department chair." Please respond to these statements in reference to the individual that is the formal leader of your department.

The Department Chair…	Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Agree	Strongly Agree
28. Encourages instructors to go beyond traditional approaches to teaching.						
29. Has a clear vision of how to improve teaching in the department.						
30. Implements teaching-related policies in a consistent and transparent manner.						
31. Inspires respect for his/her ability as a teacher.						
32. Is receptive to ideas about how to improve teaching in the department.						
33. Is tolerant of fluctuations in student evaluations when instructors are trying to improve their teaching.						
34. Is willing to seek creative solutions to budgetary constraints in order to maintain adequate support for teaching improvements.						

1 2 3 4 5 6 1 2 3 4 5 6 1 2 3 4 5 6

1 2 3 4 5 6 1 2 3 4 5 6

1 2 3 4 5 6 1 2 3 4 5 6

In My Department… Strongly Disagree Disagree Somewhat Disagree Agree Agree Strongly Somewhat Agree

35. Teaching development events (i.e. talks, workshops) are hosted specifically for department instructors.

36. New instructors are provided with teaching development opportunities and resources.

37. Teaching-related policies are implemented in a consistent and transparent manner.

38. Teaching is NOT respected as an important aspect of academic work.

39. Applicants for all teaching positions are required to provide evidence of effective teaching.

40. Evidence of effective teaching is valued when making decisions about continued employment and/or promotion.

41. Teaching effectiveness is evaluated fairly.

42. Both experienced and less experienced instructors receive peer evaluations of their teaching.

1 2 3 4 5 6 1 2 3 4 5 6

1 2 3 4 5 6

1 2 3 4 5 6 1 2 3 4 5 6

1 2 3 4 5 6

1 2 3 4 5 6 1 2 3 4 5 6

In My Department…	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

43. Differences of opinion are valued in decision-making related to teaching improvement.

44. Courses are fairly distributed among instructors.

45. Teaching is respected as an important aspect of academic work.

46. All of the instructors are sufficiently competent to teach effectively.

47. It is possible to talk with others about outdated instructional practices.

48. There are structured groups organized around the support and pursuit of teaching improvement.

6

49. Differences of opinion impede decision making related to teaching improvement.

50. Instructors with a record of teaching excellence are financially rewarded (e.g., bonuses, raises, or similar).

51. The best instructors are personally committed to teaching entry-level courses.

1 2 3 4 5 6

1 2 3 4 5 6 1 2 3 4 5 6 1 2 3 4 5 6

1 2 3 4 5 6 1 2 3 4 5 6 1 2 3 4 5 6 1 2 3 4 5

1 2 3 4 5 6

Generally Speaking… Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
52. The relationships I have with instructors in OTHER departments are stronger than those that I have in my own department.	1	2	3	4	5	6

53. If you agree with statement 52, please write a few sentences to explain why:

54. If you could change ONE element of your department to better support teaching improvement, what would it be?

Postsecondary Instructional Practices Survey (PIPS)

INFORMATION

This survey was designed by researchers at Western Michigan University to collect self-reported teaching practices from individuals teaching at institutions of higher education.

ITEMS BY CONSTRUCT

Instructor-Student Interactions

P01. I guide students through major topics as they listen and take notes.

P03. My syllabus contains the specific topics that will be covered in every class session. P05. I structure my course with the assumption that most of the students have little knowledge of the topics.

P11. My class sessions are structured to give students a good set of notes.

Student-Student Interactions

P12. I structure class so that students regularly talk with one another about course concepts. P13. I structure class so that students constructively criticize one another's ideas.

P14. I structure class so that students discuss the difficulties they have with this subject with other students.

P15. I require students to work together in small groups.

Student-Content Interactions

P02. I design activities that connect course content to my students' lives and future work. P07. I frequently ask students to respond to questions during class time.

P09. I have students use a variety of means (models, drawings, graphs, symbols, simulations, etc.) to represent phenomena.

P16. I structure problems so that students consider multiple approaches to finding a solution.

Formative Assessment

P06. I use student assessment results to guide the direction of my instruction during the semester. P08. I use student questions and comments to determine the focus and direction of classroom discussion.

P18. I give students frequent assignments worth a small portion of their grade.
P20. I provide feedback on student assignments without assigning a formal grade.

Summative Assessment

P21. My test questions focus on important facts and definitions from the course.
P22. My test questions require students to apply course concepts to unfamiliar situations. P23. My test questions contain well-defined problems with one correct solution.
P24. I adjust student scores (e.g., curve) when necessary to reflect a proper distribution of grades.

Postsecondary Instructional Practices Survey (PIPS)

INFORMATION

This survey was designed by researchers at Western Michigan University to collect self-reported teaching practices from individuals teaching at institutions of higher education.

INSTRUCTIONS

The survey has 27 questions. It should take about 10 minutes to complete.

Each item is a statement that may represent your current teaching practice. As you proceed through the survey, please consider the statements as they apply to teaching your ***lowest level, largest enrollment undergraduate course taught in the last two years.***

Please read each statement, then indicate the degree to which the statement is descriptive of your teaching. There are no "right" or "wrong" answers. The purpose of the survey is to understand how you teach, not to evaluate your teaching.

1 - Not at all descriptive of my teaching
2 - Minimally descriptive of my teaching
3 - Somewhat descriptive of my teaching
4 - Mostly descriptive of my teaching
5 - Very descriptive of my teaching

Consider the lowest level, largest enrollment undergraduate course you are currently teaching or have taught in the last two years:

Enrollment:

____% Majors in your discipline
____ % Majors in other disciplines

Is this a general education course? Yes / No / Not Applicable

Weekly contact hours you teach per section:

Lecture:
Lab:
Combined Lecture/Lab:
Discussion/Recitation:
Other (please specify):

If you think we need more information about your class, please explain:

How are most decisions about teaching practices made?

I make the decisions / I'm part of a team that makes decisions / Somebody else makes the decisions

Describe if applicable:

Optional Questions. If you teach lecture and/or integrated lab, please indicate what proportion class time *during a typical week* is spent in the following activities. The sum of these questions should equal 100%.

A. The instructor talking to the whole class. ____ %

B. Students working individually. ____ %

C. Students working in small groups. ____ %

D. Students doing something else.

(please specify) ____ % Other Activity: _____ ____ % Other Activity: _____

____ % Other Activity: _____

Directions: Please indicate the degree to which the following statements are descriptive of your teaching in your *lowest level, largest enrollment undergraduate course taught in the last 2 years.*

Very descriptive of my teaching	1. I guide students through major topics as they listen and take notes.	descriptive of my teaching	teaching Somewhat descriptive of my teaching	Mostly descriptive of my teaching
	Not at all	Minimally descriptive of my		

1 2 3 4 5 N/A 2. I design activities that connect

course content to my students' lives and future work.

3. My syllabus contains the specific topics that will be covered in every class session.

4. I provide students with immediate feedback on their work during class (e.g., student response systems, short quizzes)

5. I structure my course with the assumption that most of the students have little useful knowledge of the topics.

6. I use student assessment results to guide the direction of my instruction during the semester.

7. I have students use a variety of means (models, drawings, graphs, symbols, simulations, etc.) to represent phenomena.

8. I structure class so that students explore or discuss their understanding of new concepts before formal instruction.

9. I use student questions and comments to determine the focus and direction of classroom discussion.

1 2 3 4 5 N/A 1 2 3 4 5 N/A

1 2 3 4 5 N/A

1 2 3 4 5 N/A 1 2 3 4 5 N/A 1 2 3 4 5 N/A

1 2 3 4 5 N/A 1 2 3 4 5 N/A

Directions: Please indicate the degree to which the following statements are descriptive of your teaching in your *lowest level, largest enrollment undergraduate course taught in the last 2 years.*

Very descriptive of my teaching | descriptive of my teaching | Somewhat descriptive of my teaching | Mostly descriptive of my teaching | Not at all | Minimally descriptive of my

10. I structure class so that students can take a clear set of notes. 1 2 3 4 5 N/A

11. I structure class so that students regularly talk with one another about course concepts.

1 2 3 4 5 N/A

12. I structure class so that students constructively criticize one another's ideas.

13. I structure class so that students discuss the difficulties they have with this subject with other students.

14. I require students to work

1 2 3 4 5 N/A

together in small groups. 1 2 3 4 5 N/A 15. I structure problems so that students consider multiple approaches to finding a solution. 1 2 3 4 5 N/A

16. I provide time for students to reflect about the processes they use to solve problems. 1 2 3 4 5 N/A

17. I give students frequent assignments worth a small portion of their grade. 1 2 3 4 5 N/A

18. I require students to make connections between related ideas or concepts when completing assignments. 1 2 3 4 5 N/A

19. I provide feedback on student assignments without assigning a formal grade. 1 2 3 4 5 N/A

Directions: Please indicate the degree to which the following statements are descriptive of your teaching in your *lowest level, largest enrollment undergraduate course taught in the last 2 years.*

Very descriptive of my teaching

20. My test questions focus on Not at all descriptive of my teaching Minimally descriptive of my teaching Somewhat descriptive of my teaching Mostly descriptive of my teaching

important facts and definitions from the course. 1 2 3 4 5 N/A

21. My test questions require students to apply course concepts to unfamiliar situations. 1 2 3 4 5 N/A

22. My test questions contain well defined problems with one correct solution. 1 2 3 4 5 N/A

23. I use a grading curve as needed to adjust student scores. 1 2 3 4 5 N/A

Follow up: If you agree with statement #52, please write a few sentences to explain why:

53. If you could change ONE element of your department to better support teaching improvement, what would it be?