Findings from the Follow-Up Survey on Student Learning Differences

January 2015
Executive Summary

The Los Angeles Mission College (LAMC) Office of Institutional Effectiveness conducted a survey on the assessment and application of student learning differences in Spring 2014 to assist the College in adopting a working definition of student learning styles and needs. Based on the results of that survey, LAMC adopted the following working definition of how to address student learning styles and needs: "adapting your materials, pedagogy or content to take into consideration your students’ different abilities, background knowledge and interests."

During Fall 2014, the Office of Institutional Effectiveness conducted a follow-up survey to document how faculty have applied the concept of student learning styles and needs to improve student learning outcomes at LAMC. The survey was administered to both full-time (regular) faculty and adjunct faculty members. 38 valid responses were received, 53% from full-time faculty and 47% from adjunct faculty. 20 departments/disciplines were represented.

The survey found that the vast majority of faculty, both full-time and adjunct, consider student learning styles in their teaching. In fact, 95% of respondents reported that they had taken student learning styles and needs into account in their Fall 2014 classes (see figure 1a). The small number of faculty members who did not take learning differences into account were concentrated in the Mathematics and Physical Sciences departments (see figure 1b).

The primary methods used by faculty to assess differences in student learning styles and needs were (1) classroom discussions either in small groups or as a whole and (2) exams or essays before the midterm. Both methods were used by two-thirds of respondents (see figure 2). Other popular assessment methods were non-graded Classroom Assessment Techniques or other in-class learning checks (used by 61% of respondents), individual meetings with students (used by 58%) and exams or essays after the midterm but before the final (also 58%).

The following section gives detailed breakdowns of the responses to quantitative questions as well as the responses to the open-ended questions.
Figure 1. Have you taken student learning styles and needs into account in your classes for Fall 2014?

<table>
<thead>
<tr>
<th>Faculty Assignment</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time faculty</td>
<td>95.0%</td>
<td>5.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Adjunct faculty</td>
<td>94.4%</td>
<td>5.6%</td>
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<td><strong>Total</strong></td>
<td><strong>94.7%</strong></td>
<td><strong>5.3%</strong></td>
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<table>
<thead>
<tr>
<th>Department or Discipline</th>
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<th>No</th>
<th>Total</th>
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<td>100.0%</td>
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<td>CAOT</td>
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<td>0.0%</td>
<td>100.0%</td>
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<tr>
<td>Chicano Studies</td>
<td>100.0%</td>
<td>0.0%</td>
<td>100.0%</td>
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<tr>
<td>Child Development</td>
<td>100.0%</td>
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<tr>
<td>Computer Science</td>
<td>100.0%</td>
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<tr>
<td>Culinary Arts</td>
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<td>Dev Com</td>
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<td>100.0%</td>
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<tr>
<td>English</td>
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<tr>
<td>ESL</td>
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<td>100.0%</td>
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<tr>
<td>Health/Kinesiology</td>
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<td>0.0%</td>
<td>100.0%</td>
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<tr>
<td>History</td>
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<td>0.0%</td>
<td>100.0%</td>
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<tr>
<td>Law</td>
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<td>Library Science</td>
<td>100.0%</td>
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<td>Life Sciences</td>
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<td>Mathematics</td>
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<td>20.0%</td>
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<td>Music</td>
<td>100.0%</td>
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<td>Personal Development</td>
<td>100.0%</td>
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<tr>
<td>Philosophy</td>
<td>100.0%</td>
<td>0.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Physical Sciences</td>
<td>66.7%</td>
<td>33.3%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Unknown</td>
<td>100.0%</td>
<td>0.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>94.7%</strong></td>
<td><strong>5.3%</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>
Figure 2. What primary methods did you use to assess differences in student learning styles and needs in Fall 2014? (Please check all that apply.)

<table>
<thead>
<tr>
<th>Assessment Method</th>
<th>Full-time Faculty</th>
<th>Adjunct Faculty</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom discussion either in small groups or as a whole</td>
<td>70.0%</td>
<td>61.1%</td>
<td>65.8%</td>
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<tr>
<td>Exams or essays before the midterm</td>
<td>55.0%</td>
<td>77.8%</td>
<td>65.8%</td>
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<tr>
<td>Non-graded Classroom Assessment Techniques or other in-class learning checks</td>
<td>60.0%</td>
<td>61.1%</td>
<td>60.5%</td>
</tr>
<tr>
<td>Individual meetings with students</td>
<td>50.0%</td>
<td>66.7%</td>
<td>57.9%</td>
</tr>
<tr>
<td>Exams or essays after the midterm but before the final</td>
<td>40.0%</td>
<td>77.8%</td>
<td>57.9%</td>
</tr>
<tr>
<td>Graded assessment during the first two weeks</td>
<td>45.0%</td>
<td>38.9%</td>
<td>42.1%</td>
</tr>
<tr>
<td>Midterm exam</td>
<td>30.0%</td>
<td>50.0%</td>
<td>39.5%</td>
</tr>
<tr>
<td>Questionnaire completed by students</td>
<td>35.0%</td>
<td>11.1%</td>
<td>23.7%</td>
</tr>
<tr>
<td>Other method</td>
<td>20.0%</td>
<td>22.2%</td>
<td>21.1%</td>
</tr>
<tr>
<td>None of the above</td>
<td>10.0%</td>
<td>0.0%</td>
<td>5.3%</td>
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</tbody>
</table>

Figure 3. What change(s) did you make to your pedagogical approach(es) based on your students' different learning styles and needs?

- Adding more videos, videocasts, whiteboard diagrams and posting of relevant youtube videos
- Individual tutoring, extra time for assessments and sending assessments to DSPS office, helping students organize peer tutoring
- In my understanding, the best evidence shows that it's most important to match the "style" to the material rather than to individuals. I integrate auditory and visual material in my presentations.
- I use the etudes online system to enhance this face-to-face class because it allows student to review the materials presented in class and to practice and re-submit class worksheets.
- Based on how students perform during the semester I usually try to change my teaching style. For example, in my biology hybrid course I have noticed that some students don't read the text. I started requiring students to submit MetaCognitive logs (adapted from Reading Apprenticeship by WestEd) and highlight five important concepts of each chapter including their interpretation.
- Kinesiology-Decreased or increased skill level. Broke down or complicated task. Teamed up students to learn together or had one student teach the other. Altered pace or order of the material being presented. Rather than teaching all the principles at once, they would be spread out over weeks. Rather than teaching principle of specificity first, teach overload and reversibility first. Rather than teaching the science behind energy use first, teach behavior eating prior to the details of it.
- English 101-Based on my present readings in a Culture of Literacy, I made it clear to students that their personal experiences, as related to the concept studied, were valued and welcomed. However, it was also made clear that one of their objectives was to learn how to research a topic to further their knowledge of a subject. Our objective was to further knowledge and to re-examine knowledge in terms of context and logical analysis.
- Always talk about learning styles in all classes I teach. I include experiential activities connected to learning styles. CD45: first two weeks of class students are introduced to learning styles and are asked to identify their own style. Knowledge is delivered through hands on experiences, video,
lecture and power point. It is crucial to have the student being aware of their own style because it empowers them to learn about their strengths and use them towards their academic success. In order to address learning styles we need to make students being aware of their own, talking about it is not enough because it will only reach the auditory learners, it has to be experiential.

- I have incorporated more interactive exercises in my Business English class to provide more variety and to change the pace of the class. I have augmented the class by posting relevant materials on my LAMC website; I use Etudes to enable students to keep track of their grades and to enable them to interact more with each other; I send my students an e-mail after every class to remind them of what is due the next class. I give them practice quizzes to check their understanding of each chapter. I distribute rubrics for their writing assignments before the assignment is due so that they know what is expected of them and what the criteria are for the evaluation. I emphasize the learning outcomes for the class and how each assignment they are given helps them achieve those SLOs.

- For CLN ART # 0468 & 0469, I assigned smaller groups of students and applied specific competencies to practice common cooking and cutting skills. I assisted students with one-on-one practice for the duration of the lab time (2.45 hrs.) during the course of the semester. Students had ample time to practice under my direct supervision where I corrected common mistakes such as: correct knife grip, proper stance and postures; maintaining working stations, clean and thorough utilization of products; critical skills commonly practice in food service industry.

- Incorporated non-graded classroom exercises - CSIT 407 - Programming Logic, 440C, increased the number of classroom discussions where students break into small groups - CSIT 452 - Java

- English 101: Every semester I include a variety of activities and learning opportunities in addition to Readings, Exercises, Peer Review, and Essays for each Project my students work on.

- English 21: I utilized a web-based grammar instruction site (MySkillsLab) to reinforce the grammar concepts we discussed and worked on in groups and individually during class. My students also did readings, other scaffolding exercises, and peer review, leading up to their out-of-class essays.

- I've addressed this issue by providing a variety of assignment types-essays, exams, individual presentations. group presentations and team essays

- I always include different activities to engage all learning styles. We do short lectures to demonstrate a study skill or student success practice and then I provide time for them to practice this skill in class either one-on-one or in group work. I incorporate videos and also have students come up to board to share on their group work

- Since movement skills are extremely individual, focus on modification is a necessity in a dance or Pilates course. Creative thought and approach in choreography development is diverse and varied. Acknowledging those differences and not judging or evaluating that diversity, rather embracing it is a crucial approach to success and growth in my courses and approach to teaching, in general.

- Computer Science 430 -- Microcomputer Applications II: There is more relevant feedback and student questioning. It easier for them to focus on the class projects. I work with my students outside the classroom in my club. It helps me to understand the new generation of computer literate gamers. They feel more at ease asking me basic questions about the terminology of the workplace. Older students and DSPS students seem to respond better too, and it is easier to have them all in the same class learning together.

- Rephrasing answers to previously answered questions. Using technology, to answer questions. I demonstrate how to solve a math problem for them. Next, I pose a similar or harder type and let them try to solve it. After about 5 or so, we either go over the problem as a class or I ask someone to go up to the whiteboard and explain the problem to the class.
• I stay abreast of the current literature in composition. Most recently, for English 101, I used the lens and the artifact assignment that I found was being used at another college via my research. Simply put, the lens is the assigned reading done by the entire class that focuses on a particular view and the artifacts are outside readings students find from research to prove (or disagree) with the argument presented in the assigned reading. This approach gives students a solid understanding of how to support an argument with outside evidence or artifacts.

Figure 4. How did these changes improve your students' learning outcomes?

• Based on informal surveys of students, adding visuals to the lectures made them more clear, more interesting, and more memorable.
• My students still have problems, but I see a sense of organization in their work that wasn’t there before. They can identify a literary issue, explain it, and give reasons and examples to prove their thesis. They utilize revision. They make fewer mistakes now.
• Students were more engaged, asked more questions, and discussed topics more amongst themselves.
• I have noticed that students leave better comments on the discussion forum. Biology 003 Hybrid
• It appeared that students were more connected and excited about the course content (English 101).
• CD45: through hands on experiences, peer students are able to move from divergent thinking into convergent thinking, therefore they practice different levels of the Bloom’s taxonomy from basic understanding of concepts to evaluation. Student learning outcomes reflect the concrete skills that students have practiced and experienced in class through active learning and cooperative learning.
• Smaller group sizes increased the responsibility per student, average scores increased with less peer student complaints.
• Students in my Business English class are more engaged and attentive. They are rarely absent. Since the expectations are clearer, and they are given more opportunities to apply what they are learning before they are tested on the material, they are doing better on the tests and writing assignments and more of them are achieving the course as well as program outcomes.
• By assigning smaller groups to the sections mentioned, students were able to understand the concepts being practiced and recall the information capture during the time assigned for competencies. With the information gained, students will be able to apply learned skill in subsequent courses and continue strengthen skills by practicing with larger recipes used at the Mission Café.
• Sometimes students learn better from their peers. It does help. Math 227-Statistics
• Specifically for the Chemistry courses (Chem 51 and Chem 65), I saw an increase of performance/understanding on laboratory reports and assessments.
• This method improved my students' ability to compose a college level argument based on their opinion on a specific topic that they were able to support with evidence from their own research. Students otherwise have a difficult time understanding how to use their sources to support their view and instead stick to high school level reports/summaries. This method moves them into the college level realm of writing.
Follow-Up Survey on Student Learning Differences

Figure 5. Please indicate any forums/venues where you engaged in dialogue about meaningful assessment practices and/or how to improve pedagogy and student learning during Fall 2014, including sharing successful practices with colleagues. (Please check all that apply.)

<table>
<thead>
<tr>
<th>Forum/Venue</th>
<th>Full-time Faculty</th>
<th>Adjunct Faculty</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2014 Flex Day</td>
<td>90.0%</td>
<td>55.6%</td>
<td>73.7%</td>
</tr>
<tr>
<td>Informal discussions on campus</td>
<td>80.0%</td>
<td>44.4%</td>
<td>63.2%</td>
</tr>
<tr>
<td>Department/discipline meetings</td>
<td>85.0%</td>
<td>33.3%</td>
<td>60.5%</td>
</tr>
<tr>
<td>Fall 2014 SLO Summit</td>
<td>90.0%</td>
<td>5.6%</td>
<td>50.0%</td>
</tr>
<tr>
<td>Conferences/outside events</td>
<td>65.0%</td>
<td>33.3%</td>
<td>50.0%</td>
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<tr>
<td>Eagle's Nest activities</td>
<td>35.0%</td>
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<tr>
<td>Shared Governance Committee meetings</td>
<td>30.0%</td>
<td>0.0%</td>
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<tr>
<td>LACCD District meetings/events</td>
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<td>Other forum/venue</td>
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<tr>
<td>None of the above</td>
<td>5.0%</td>
<td>5.6%</td>
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</table>

Figure 6. Please enter any additional comments you have related to student learning styles and needs at LAMC.

- A significant part of the Basic Skills class I teach includes orienting students to college behaviors—time management, textbook reading, taking notes, accessing notes for studying, attending class, punctuality, engagement, peer group studying, and accessing services on campus. On a daily basis, I reference incorporate strategies and recommendations to students. For our students' success, I would appreciate support of those behaviors in other agencies on campus. I do receive progress reports for some students. Perhaps more of them would help students alter their study strategies in order to improve or maintain progress. On a more significant note, I think Basic Skills students and DSPS students may perform well in more modularized classes in which for example, they completed a unit at a time. Consider different instructional formats.
- Any discussion of learning styles needs to begin with recognition of the evidence from recent studies rather than a reliance on untested pedagogical notions.
- Continue weekly opportunities to meet formally and informally in the Eagle's Nest. Have Eagle's Nest open and staffed one full day each week during the semester, so faculty have a place to go to ask questions and get help.
- I find participating in interviews and evaluation to be the most stimulating, since I get to really see how other faculty teach and consider their methods for my own classroom.
- I would recommend that interested faculty work on developing Faculty Inquiry Groups (FIGS) I plan on doing on for our Pathways to Law Initiative. Check Lane Community College on all of the FIGS which they use at their school, and what topics they cover.
- Integrated curriculum: There should be more communication as how we could better integrate the courses.
- It cannot be presumed that we teachers know and identify accurately learning styles of students. Often, the students don't know how they learn best. The danger is that they assume they learn one
way only and the teacher should accommodate their style. As far as needs goes, all students need to get their basic skills and study habits set, at college level.

• It is important to keep in mind the big picture of what we do. Whatever we implement needs to be supportive of the objectives that are appropriate for the course content we are teaching. Implementing diverse methods of instruction to enable students to understand content is perfect. Implementing diverse methods of instruction for the sake of using diverse methods is counterproductive and distracting from the learning of course content. The modality of instruction should never out trump the course content and the objectives of the course. Note, course content should include both an understanding of course specific knowledge and ideally whatever skills are necessary to make that knowledge useful in the workplace and in life. My point is that we need to make sure that the methods used are in sync with our objectives. I worry about "assessing diverse learning styles." We may become aware of the learning styles of specific students during the course of the semester, but it dangerous for instructors to take on the role of this type of assessment, which frankly is beyond our competency. The assessment is irrelevant. What we have to all do is to design our course material knowing that our students are diverse in terms of how they learn.

• Our Culinary Arts students take several courses often leading to multiple students enrolled in more than one section. Not only does [this] lend itself towards student comradery but also builds towards a vast network including industry chefs, hotels, caterers and restaurateurs. We have a pretty unique and dynamic discipline.

• Really would like to see Turnitin subscribed to by college. Would allow me to have students submit writing assignments through that before going smooth (they get to see whether they are plagiarizing, or "flirting" with it.) A good teaching instrument... (I have access to it teaching online as adjunct for Lake Tahoe Community College, but obviously, cannot add any Mission students to it for student submission purposes.)

• We have had a number of very interesting and valuable discussions at LAMC this past year about learning styles, student needs, and methods of engaging students. I have enjoyed the comraderie and the information I have learned from other colleagues.