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Listening to the New Student Voice: How They Learn

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LISTENING TO THE NEW STUDENT VOICE: HOW THEY LEARN

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Introduction:

In 2003¹ it was forecasted that medical students' preclinical learning would mostly consist of large portions of educational training and instruction provided on the internet and other technology tools, while the traditional lecture format would become more infrequent. Five years later many medical schools have adapted to this new technological-enhanced learning environment.

No one can argue that today's millennial generation of medical students is more familiar with technology than their predecessors. However, does this technology savvy generation report that these new tools are indeed superior when compared to the traditional tools of facilitating learning and understanding in the preclinical years? Additionally, is there a difference in usefulness of learning techniques for students in year one as compared to year two of medical school?

This study examines the learning tools in basic science courses to determine how the millennial generation of students report they are learning best. Tools from our blended learning curriculum were investigated within and across preclinical years one and two.

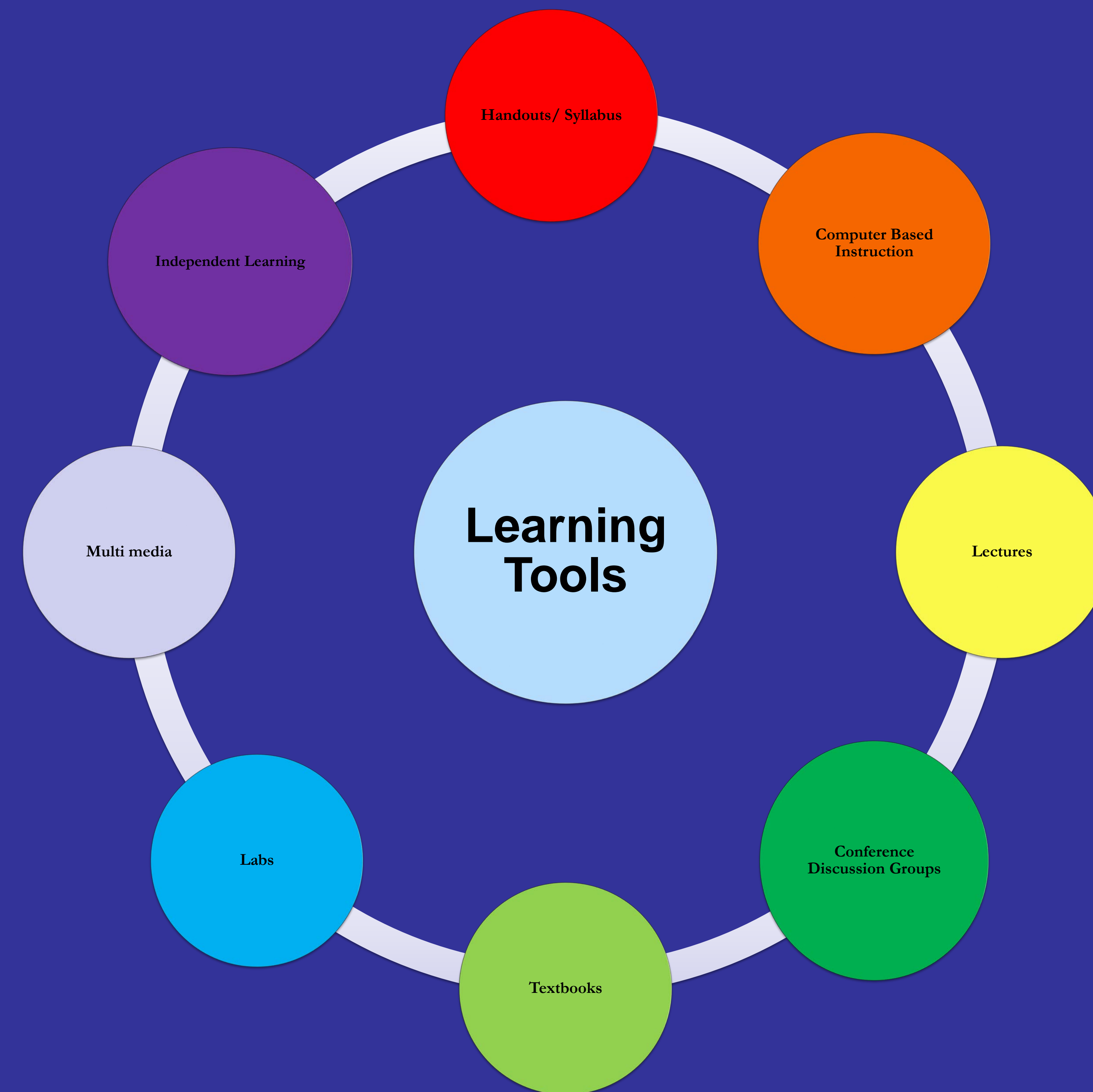
¹Envisioning the Future of Academic Health Centers, Task Force on Academic Health Centers, The Commonwealth Fund, February 2004 available at:
http://www.commonwealthfund.org/publications/publications_show.htm?doc_id=221312#areaCitation 8/19/08

The student practicals were awesome and a great way to learn because students discussed so much and taught one another throughout those sessions. (AY0506, Yr1)

Methods:

End of course evaluation data was analyzed in a matched design analysis from two recent cohorts (N=185). The cohorts were AY0405 (Y1)-AY0506 (Y2) (cohort 1) and AY0506 (Y1) -AY0607 (Y2) (cohort 2). Students rated the extent each of eight techniques (Independent Learning, Handouts/Syllabus, Lectures, Computer Based Instruction(CBI), Conferences/Discussion Groups, Textbooks, Multimedia, Labs) helped them understand and learn the subject (four point scale: None =1, Very Little=2, Somewhat =3 and Very Much=4). Ratings of the items were averaged across all courses at the student level. Differences across years were assessed using paired t-tests. Additionally, two evaluators, blinded to the quantitative results, performed independent qualitative analysis of student comments.

I'm really glad that lectures are streamed online.... they are especially helpful for review after I've already attended the lecture and looked at notes again. Kudos!! (AY0607, YR2)



Learning Tools Usefulness Across all Preclinical Courses in Year 1 & 2

	Independent Learning	Handouts Syllabus	Lectures	Computer Based Instruction	Textbooks	Conference Discussion Groups	Labs	Multimedia
Rank Year 1	1	2	3	4	5	6	7	8
Avg¹ Year 1	3.80	3.73	3.48	3.35	3.29	3.24	3.17	2.93
Rank Year 2	1	2	3	4	7	5	8	6
Avg¹ Year 2	3.81	3.67	3.28	3.19	2.82	3.02	2.30	2.91
Change in RANK	No Change	No Change	No Change	No Change	↓	↑	↓	↑
Statistically significant² change in AVERAGE RATING			√	√	√	√	√	
N	185	182	155	185	184	179	183	184

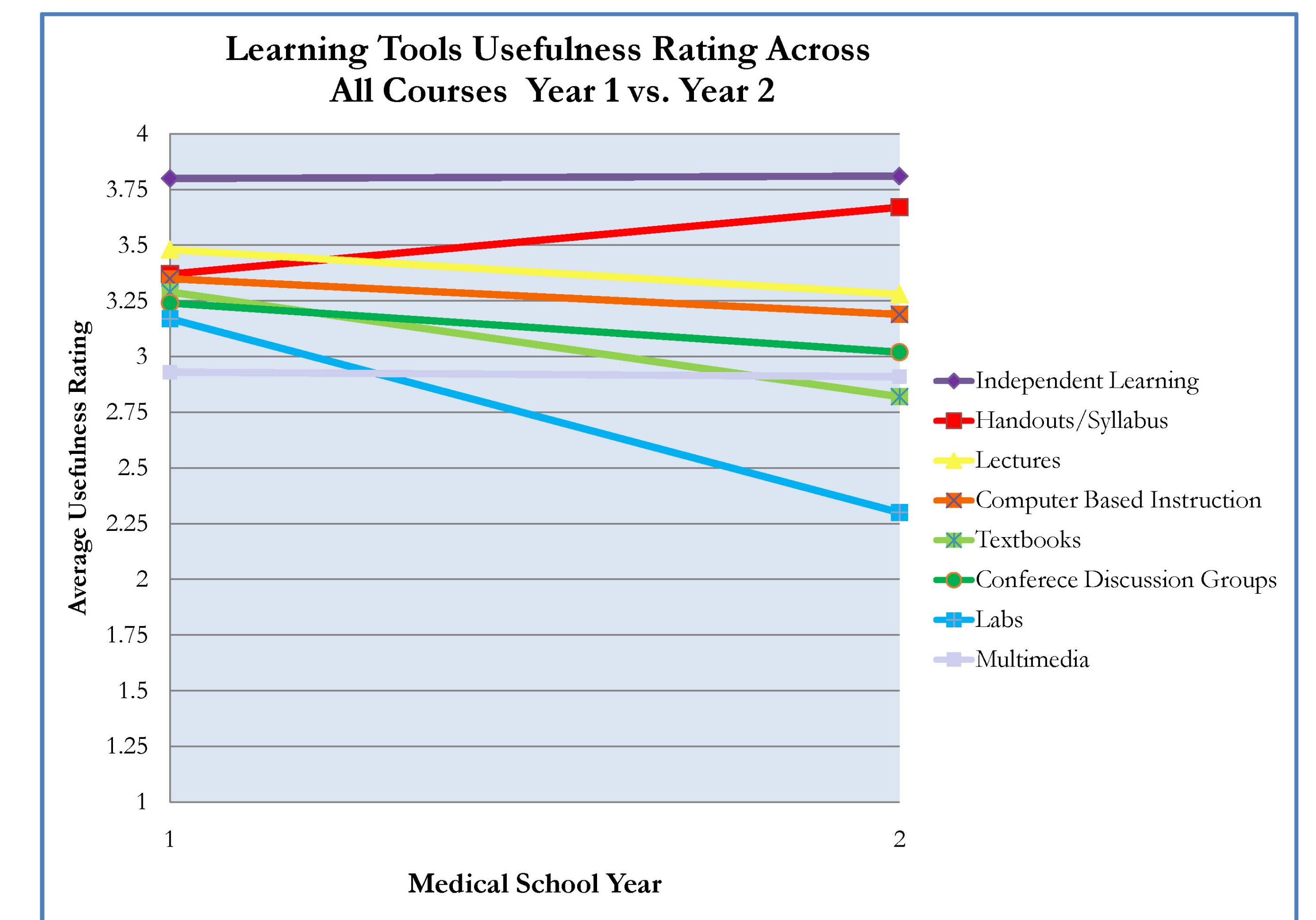
¹1=None, 2=Very Little, 3=Somewhat, 4=Very Much

²Statistically significant at p < .05 level

Results:

Analysis revealed "Independent Learning" and "Handouts/Syllabus" were stable and the most helpful in facilitating learning in both years. Even though "Lectures" and "CBI" had the 3rd and 4th highest ratings in both years, they both significantly dropped in year two (p < .01).

The small group sessions provided a great opportunity to ask questions and solidify our understanding. A lot of learning occurred there. (AY0607, YR2)



Perhaps more problem based cases -- this is a more interesting and more intellectually stimulating way to learn. (AY0506, Yr1)

Conclusion:

Findings suggest that "Independent Learning" appears to be the single most useful method for helping students facilitate learning in the preclinical years. Perhaps tools that aid students' "Independent Learning" could be incorporated into the preclinical curriculum. As described by previous research², the definition of "Independent Learning" remains unclear due to its inherent subjective nature. These findings necessitated a change to the UMMS evaluation system, where in Spring of 2008, an opened ended item was added to the evaluations which asked students to define "Independent Learning." Further study on this topic is currently ongoing.

²Gagliardi, et.al Med.Ed. 2004; 38:1061-1070.