

Mindful Learning in College Class Piano

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ABSTRACT

Can the techniques of mindful learning explored by Harvard researcher, Ellen Langer (1997), be applied effectively with respect to the skills of sight reading in the college piano class setting? Langer finds that novelty and movement play a key role in heightening attention to cognitive tasks. Given that even experienced musicians approach sight reading with trepidation, do novel pedagogical approaches — using movement and technology — enhance sight reading skills in students of piano?

STUDIES

In Fall 2011, students in College Piano took part in two studies to test the application of Langer's approach.



Mindfulness:

Students were randomly assigned to one of two conditions:

- (1) Shadow play: Students were given a piece of music and answered questions about it in their heads. Students “shadow played” the music by playing it on a closed keyboard.
- (2) Mindful: Students were given a piece of music and answered questions about it in their heads, while standing and swaying back and forth. Students then perform a mindfulness-based stress reduction technique.

Students in both groups completed a post-survey about perceived helpfulness of the conditions, as well as a sight reading test, which assessed articulations, dynamics, accuracy, and rhythm. Additionally, instructors took detailed observational notes of students' performances during the tests.



Technology:

Students were randomly assigned to one of three conditions. Musical scores were:

- (3) Printed on magenta paper.
- (4) Visualized on a Mac Mini.
- (5) Read from a digital interactive piano, with a “bouncing ball” interface that helped track the notes in the tempo.

Students in all three groups completed a post-survey about perceived helpfulness of the conditions, as well as two sight reading tests, which assessed accuracy and rhythm.



MINDFULNESS

Although students' mean errors under mindfulness conditions increased, there was no statistically significant difference in performance between the two groups (Table 1). Overall, students found shadow play more helpful, compared to mindful conditions.

Some students did well with mindfulness, especially those students who were more anxious during the test and reported that the breathing exercises helped. Although there was no statistically significant difference, in most cases, students who indicated that breathing exercises were helpful demonstrated fewer performance errors, compared to those who found them unhelpful.

Table 1: Mindfulness Methods

		Mindful (34 students)	Shadow Play (29 students)
Performance Test Results	Mean Articulation Errors	.32	.55
	Mean Dynamics Errors	2.03	1.76
	Mean Accuracy Errors	10.03	6.28
	Mean Rhythm Errors	7.32	5.10
Survey Findings	Student Enjoyment of Method	50% yes	43% yes
	Helpfulness of Method	42% yes for movement 61% yes for breathing	77% yes

TECHNOLOGY

More students enjoyed the use of the Mac Mini and digital piano during performance tests (Table 2). However, errors in rhythm and note accuracy increased with the introduction of these technologies. Student comments on the post-test survey indicated that the additional technology was more of a distraction than a useful learning tool.

Table 2: Technology Methods

	Rhythm	Colored Paper (30 students)		Mac Mini (16 students)		Digital Piano (17 students)	
		Notes	Rhythm	Notes	Rhythm	Notes	Rhythm
Performance Test Results	Mean Errors in Simple Song (“Aura Lee”)	0.2	0.8	0.7	1.2	3.2	4.4
	Mean Errors in More Difficult Song (“Little Fox”)	11.0	8.2	18.6	10.3	17.4	27.4
Survey Findings	Student Enjoyment of Method	28% yes		31% yes		44% yes	
	Helpfulness of Method	17% yes		31% yes		22% yes	

Implications for Teaching

- (1) Distractions need to be downplayed in the use of technology and mindfulness techniques.
- (2) Assessments at the start of the term are helpful for matching students to the most effective learning techniques. A battery of learning preferences tests will help speed up the planning and learning process for students.
- (3) Because some students approach sight reading with trepidation, it is helpful to pair stress reduction exercises with performance tests.

References and Acknowledgments

- Langer, E.J. (1997). . Reading, MA: Perseus Press.
- Photos are printed with student permission.
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