

## HILT SPARK GRANT FINAL REPORT ADDENDUM:

## STRATEGIES FOR INTERACTIVE TEACHING IN LECTURE COURSES

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The purpose of this addendum is to identify strategies that will enable traditional lecture courses in history and related subjects to be augmented with interactive exercises that increase student engagement and improve learning outcomes. While interactivity is a term without a fixed meaning, this report focuses on the creation of activities and assignments involving material artifacts, constructed devices, and physical locations outside of the classroom. This report describes the logistics associated with several common interactive activities, in order of most simple to most complex, emphasizing the idea that regardless of the subject matter of the course and the resources available, some form of interactivity is always possible.

Course Demonstrations. Demonstrations involving historical artifacts, devices, or simulacra are among the easiest forms of interactive additions to a course. Depending on the subject matter, artifacts can be borrowed locally from museums, but this requires advanced notice and cooperative museum staff, and cannot be repeated frequently without causing significant logistical problems. Instead, frequently-need objects should be purchased online from retailers and auction sites that specialize in vintage material (eBay.com, Etsy.com) or which offer a large inventory of new and used goods (Amazon.com). Generally, shipping policies at such retailers will require that the decision about a demonstration artifact be made one week prior to the scheduled lecture, otherwise exorbitant shipping costs will result, and the instructor will likely have little time to examine the artifact and plan its use. It is important, too, that the artifact be associated with an activity or explanation, as otherwise its use in class will be brief and unmemorable.

Instructors should hesitate to manufacture their own demonstration objects or course props unless they are able to devote sufficient time to the endeavor. The easiest structural material with which to work is foam board, which is readily available, inexpensive, and may be cut with a hobby knife and glued with a range of fast-drying adhesives, like rubber cement. Instructors will have no time to paint or draw props: graphics should be obtained online and printed on large-format paper which can be dry-mounted on foam board at any copy shop; some online providers will print images and mount them, but these orders may take several days to complete. Course demonstrations work best in seminars and small lecture courses (approximately 25 students), in which all students have good sight lines to the front or center of the classroom.

Distributed Artifacts. Larger lecture course may render most static demonstrations difficult to view. An artifact passed among students will provide more personal interaction with the object and enable a brief amount of personalized investigation. Fears of students damaging passed items are unsupported by experience: the real danger is that students will spend too little time with an artifact, not too much. Instructors should therefore encourage students to perform a particular activity with the artifact. Artifacts, though, should not be likely to cause cuts or lacerations, or otherwise pose a safety issues to students or persons outside of class. In

the event gloves are required for safe handling of objects, instructors should offer students vinyl or nitrile gloves that will not trigger latex allergies. Nor should students handle artifacts that will act as vehicles for the transmission of infectious diseases (i.e., anything to be tasted or worn, especially on they face). Well-monitored seminars will permit the use of more delicate or problematic demonstration artifacts; if a passed artifact could cause safety issues if removed from the classroom, though, it should not be used in a large lecture class. Still, instructors should assume that anything distributed in class will be damaged or lost, though it likely will not be.

Student-Gathered Artifacts. Although it is tempting to assign students to gather and bring to class their own artifacts and material objects, compliance with such assignments is generally quite low, and they tend to be difficult to grade. As a result, this kind of activity is not recommended.

Student-Constructed Artifacts. Opportunities to compete against each other, alone or in teams, in the construction of objects are virtually always well received by students and should be encouraged. Short "challenges" may be conducted in class using simple materials purchased in bulk. Instructors should aim for activities that can be explained in a few minutes, and which will occupy student attention intermittently during class and be collected at its completion (instructors should offer students envelopes or other means of identifying and submitting their objects). In-class challenges also offer a convenient way to ensure (and grade students for) attendance, especially if the exact day of the challenge is not announced in advance. The challenge may constitute part of the formal participation grade or be offered for extra credit, in which case offering as little as one point of credit (out of 100) is sufficient to motivate student participation. Many students in lecture courses will routinely skip class and find out only later that such an assignment was offered. Students who miss class will likely seek make-up options for in-class construction challenges; they should not be provided unless the challenge is part of the formal grade and the absence is excused.

Team-based challenges prepared outside of class can be extremely rewarding for instructors and students alike. The optimal team size is three-to-four students; larger teams will fail to harness the participation of all team members, and smaller teams may lack the necessary skills or time to succeed. Students are not generally skilled at forming teams of uniform size, and will unusually bunch together in cohorts of friends, leaving a small number of groups short-handed. Teams will need to be graded as teams, which can pose fairness problems, so team-based activities should not constitute the bulk of students' grades. Instructors should be discouraged from likening academic "group work" to real-world employment, as the analogy can be infuriating to students and is false. In real-world team activities (professions, military, etc.) formal hierarchies determine individual contributions and credit, and unproductive team members are terminated or reassigned. In classroom assignments, this is not possible. Providing some opportunity in class for students to present constructed objects to the whole class is generally valuable, but even when divided in teams, the presentation of a large lecture course's student work will easily fill a lecture. If such activities are required, course enrollment should be capped so that teams will have at least a few minutes each to present their work during regularly schedule class meetings.

Site Visits. Interactive activities outside of class can be extremely useful but are difficult to schedule if they are not on campus. Students' schedules make it virtually impossible to schedule a mandatory event outside of class meeting times that all students can attend; even in-class activities will lose a certain number of students to athletics and other excused absences. Unless course resources in money and teaching staff are extensive, field trips are best conducted as extra credit activities; otherwise, small groups led by members of the teaching staff work best. Self-directed "scavenger hunts" should not be attempted, as students will attempt to sabotage their peers' completion of the assignment by damaging or stealing University property to gain an advantage.

Thank you, and please let me know if you have further questions.