Copyright Statement

The copyright law of the United States (Title 17, United States Code) governs the making of photocopies or other reproductions of copyrighted materials. Under certain conditions specified in the law, libraries and archives are authorized to furnish a photocopy or other reproduction. One of these specified conditions is that the photocopy or reproduction is not to be used for any purpose other than private study, scholarship, or research. If a user makes a request for, or later uses, a photocopy or reproduction for purposes in excess of fair use that user may be liable for copyright infringement.

Taylor, M. G., & Shore, W. J. (2019). Putting the "x" in expertise: Development and assessment of a short-term study abroad course in London. *Journal on Excellence in College Teaching, 30*(4), 37-65.

Putting the "X" in Expertise: Development and Assessment of a Short-Term Study Abroad Course in London

Marianne G. Taylor
Wendelyn J. Shore
Pacific Lutheran University

The authors describe the development, execution, and assessment of a one-month study abroad course in London, England. Course learning objectives are discussed, linked to specific assignments, and evaluated using multiple methods. The authors highlight two team-based assignments on expertise development related to (1) navigating the London Underground and (2) aspects of London culture. Analyses focus on students' self-ratings at three time points, identification of themes in students' final reflections, and independent coders' ratings of achievement of course objectives evident in major assignments. Results indicate that students made significant improvements related to course learning objectives while also engaging in meaningful reflection about their experiences.

Study abroad is generally regarded as a valuable, even transformative, learning experience. Our goal was to provide such an experience for psychology students that allowed for meaningful engagement with the host city (London, England) and its denizens in ways that were centrally rather than peripherally related to academic achievement. Further, we sought to design a course that would require students to apply their knowledge of the discipline to the *process* of studying abroad. To achieve this, we encouraged students' metacognitive engagement and active reflection on the learning process itself. This article describes the development and delivery of a one-month study abroad course designed to achieve these goals as well as assessment of the course's learning objectives.

Why Study Psychology Abroad?

One of us began her own college study abroad experience with an assignment entitled, "Pourquoi la psychologie?" ("Why Psychology?"), to which she responded, "parce qu'on peut l'utiliser pour étudier n'importe quoi" ("one can use it to study *no matter what*"). The less than elegant French aside, this notion holds true. Our initial conversations leading to our study abroad course focused on encouraging students to reflect on how psychology provides a lens for exploring any topic of personal interest. We imagined editing a textbook entitled *The Psychology of X*, with different authors writing about their favorite topic, X, and discussing how researchers have approached it (or *could* approach it) from clinical, cognitive, cultural, developmental, neuro-, physio-, and social psychological perspectives. Our co-authored chapter would envision a psychology of knitting. Students could write additional chapters for final projects. In the end, we worried that each of us, students and instructors alike, would mostly be interested in our own chapters. We needed a common X. We decided that a study away destination (in this case, London) would provide not only a common X but also an infinite variety of individual X's for consideration, and thus our "Psychology of Expertise: London as a Case Study" course was born. Our shared interest in knowledge acquisition, one of us coming at it from a cognitive perspective and the other from a developmental perspective, provided additional impetus.

At the same time we were imagining our Psychology of X course, our department was strategizing how to increase the number of psychology majors who study away. Study abroad is a high-impact experience that promotes student learning, student engagement, and personal growth (Kuh, 2008). It also promotes both knowledge transfer and the application of psychology (Earnest, Rosenbusch, Wallace-Williams, & Keim, 2016; Shupe, 2013), but it is an experience in which psychology students are underrepresented (Schwebe & Carter, 2010; Stoloff, Good, Smith, & Brewster, 2015). Study away is a point of emphasis for our institution, which in 2006 became the first higher education institution to have students studying simultaneously on all seven continents, then did so again in 2008 and 2010. We have a January term, and many of our students participate in short-term study away, consistent with a growing national trend. According to U.S. Department of State statistics for 2015/2016, approximately 60% of students study abroad in programs of less than eight weeks ("Study Abroad Data," 2018). Despite the popularity of this abridged format, there are a number of challenges inherent in designing effective short-term study abroad programs, particularly those with the

potential to promote transformative learning, academic development, and personal growth. Some of the factors essential to successful student experiences include careful consideration of instructional design, learning outcome objectives, and specific characteristics of a program (Chieffo & Griffiths, 2009; Coryell, 2013; Engle & Engle, 2003).

Proponents of short-term study abroad education have a variety of suggestions for optimal outcomes. Pre-departure meetings are recommended to reduce anxiety and provide opportunities for group interaction and team-building early in the program (Duke, 2014; Ransbury & Harris, 1994). Instructors are encouraged to maintain open lines of communication and minimize conflict among participants by acknowledging potential group dynamics, discussing strategies for managing them, and building in structures for monitoring them throughout the course (Gammonley, Rotabi, & Gamble, 2007; Ransbury & Harris, 1994). Attending to students' developmental needs (Chang, 2007) and finding a balance between academic content and cultural enrichment (Koernig, 2007) are recommended for maximizing personal growth in a compressed time frame. Another common suggestion is structuring activities so that students can engage in focused interaction with the host country and culture, with ample time to process and reflect on their experiences and learning (Herbers & Mullins Nelson, 2009; Perry, Stoner, & Tarrant, 2012; Spencer, Murray, & Tuma, 2005; Walters, Charles, & Bingham, 2017).

Below we discuss our main pedagogical considerations in designing the course. We outline the course structure, learning objectives, assignments, and assessment tools, and we examine the two major assignments in depth. Our focus on best practices from the study abroad literature (for example, pre-departure learning, collaboration, team-based approaches, ill-structured tasks) provides concrete examples of how these practices could be adapted for different disciplines and in different cultural contexts. Our intention is to encourage faculty in a wide range of disciplines to adapt these ideas and design their own courses focused on the theories, concepts, and methods relevant to their own fields of study. For example, how would one approach London (or any other location of interest) from the perspective of a "Sociology of X," an "Historical Approaches to X," or an "Environmental Studies of X" course? How would the particular discipline in question shape the topics for study, the sites to be visited, the tools for analysis, and the kinds of conclusions to be drawn? Because the course we describe is focused on intentional reflection about the process of learning, it can be adapted to any content and any location of interest.

Pedagogical Considerations

As instructors of a combined research methods and statistics course, a two-semester sequence with skill acquisition at its core, our pedagogy is grounded in process as much as it is product. This emphasis on process is inherent in the study of expertise as well. Our intention was to incorporate this focus explicitly into our course. Specifically, we wanted students to reflect on their own state of knowledge acquisition; develop their metacognitive skills; and become better at identifying, monitoring, reflecting on, and revising their own learning strategies as they learned about a new domain.

Course learning objectives were mindful of the need to embed the study of behavior in context to maximize the relevance to psychology (Schwebe & Carter, 2010) and to emphasize the *process* of knowledge acquisition, the latter making the objectives adaptable for study in disciplines other than psychology. The learning objectives were to develop the following:

- LO1: a growing understanding of research and theories about knowledge acquisition and expertise (for instance, the role of metacognition in the development of expertise; characteristics of experts);
- LO2: an increased ability to examine everyday behavior with the "eye" of a scientist (for instance, critical reflection on one's own behavior in an objective and empirical way; situating the behavior in context);
- LO3: enhanced data collection skills to include meaningful field work (for instance, examination of what counts as evidence in the particular discipline);
- LO4: an ability to integrate knowledge gained from everyday behavior with that gained from scholarly sources;
- LO5: an enhancement of travel skills (for instance, in a broad sense, including how to manage the emotions associated with immersion in an unfamiliar setting); and
- LO6: personal growth in the ability to interact in an intensive living situation.

Through the course readings on expertise development and the two team-based main projects for the course (described below), we highlighted

the kinds of metacognitive skills described by Flavell (1979), including knowledge of cognition and self-regulation of cognition. We encouraged students to reflect on their own learning strategies and emerging abilities and also to be attuned to similarities and differences in learning among their teammates. We also anticipated that students would have opportunities to develop their self-regulation skills (for example, planning, monitoring, evaluating effectiveness, and making revisions to learning strategies) by deciding how to spend their time in London and how to integrate their projects successfully into their daily activities.

Overview of the Course

The month long course took place in London over January term 2018, with three required pre-departure meetings occurring during fall 2017. These meetings are an important part of preparation for successful study abroad (Duke, 2014) and included activities designed to enhance community building and travel preparation (for example, group norms, budgeting, roommate selection). We used the meetings, in part, to prepare students for the differences between British and American cultures, stressing the importance of learning from observation of our host city and its denizens. Students tended to underestimate the degree of "culture shock" they anticipated for our course because it was held in London and its close environs; after all, Londoners speak English and, other than the fact that they drive on the "wrong" side of the road, they're just like Americans, right? To combat these misconceptions, we discussed how cosmopolitan and culturally diverse London is. We encouraged students to engage with the Brits they met around issues of world events and politics and provided them with some examples of important differences between British English and American English. We walked them through a budgeting exercise where they accessed costs of a pub dinner and a movie, a concert, or some other event of interest to them online, converted those pounds to dollars, and attempted to extrapolate their reasonable expenses for a month (which the students found difficult to do with any accuracy). Across these pre-departure meetings we emphasized the importance of genuine, intentional cross-cultural engagement, pointing out that over-reliance on technology to maintain contact with family and friends at home would generally work against cross-cultural engagement (Duke, 2014).

The course itself began with two on-campus class meetings (10 hours total) introducing the literature on expertise and expertise development. We provided mini-lectures addressing major course themes and concepts (for instance, novices vs. experts, developmental trajectory, deliberate prac-

tice) along with research methods for documenting expertise acquisition (for example, concept mapping). Course readings were front-loaded, and, for their first on-campus class, students summarized relevant chapters in the *Cambridge Handbook of Expertise and Expert Performance* (Ericsson, Charness, Feltovich, & Hoffman, 2006) and additional sources (such as Kinchin, Cabot, & Hay, 2008). Students also read a popular press book, *Londoners* (Taylor, 2011; see Appendix A).

Our intention was to expose students to a common language and set of methods that would frame their experiences on the ground in London. We wanted them to approach every destination, every contact with a Londoner, and every new experience through the lens of expertise development. For example, how did learning about a new site impact their developing expertise? Did it fit with what they already knew, or did they need to make changes to their existing beliefs? When they interacted with a London cabbie or museum tour guide, where would they place them in terms of levels of expertise? Based on what criteria? What methods could they use to document how their own expertise changed over time?

Course learning objectives were supported by a variety of formal and informal assignments (see Appendix A). The two main projects focused on the London subway system (Tube project) and student-generated topics of interest related to any aspect of London and its culture (expertise project). What these projects had in common was that they involved collaboration within teams of students, and they immersed students in activities without providing them with content knowledge in advance, both features of problem-based learning (for example, Marra, Jonassen, Palmer, & Luft, 2014). Further, both projects enhanced students' interactions with their classmates as they worked in teams to accomplish common goals, goals that they themselves had to take the initiative to define and then work cooperatively to achieve (Ransbury & Harris, 1994). We intentionally provided more scaffolding for the Tube project than we did for the expertise project, thereby allowing students to take greater responsibility for planning, organizing, and carrying out their final group project after having practiced their group skills on the Tube project. Finally, both projects were designed to encourage, even force, our students out into London, to travel through the city for the Tube project using the same means that Londoners use, and then to use London as their laboratory for acquiring expertise about their chosen topic for the expertise project. Thus, both projects provided opportunities for experiential learning and interaction with the British culture, thereby serving as vehicles for a meaningful learning experience via short-term study away (Duke, 2014).

The Tube Project

This project began on our first full day in London and ended at the course midpoint. The Tube project helped students understand how to monitor and assess their own knowledge acquisition. It also encouraged independence and self-reliance by getting students out of their comfort zones right away, in a non-threatening and supported way. The Tube project can be considered a mild form of a "disorienting dilemma," described by Mezirow (1991) as an external event that causes a sense of internal imbalance and challenges one's previously accepted presuppositions (see also Herbers & Mullins Nelson, 2009). Although we expected that the degree of "disorientation" experienced would vary widely based on students' demographic characteristics and prior experiences (for example, with travel, public transportation, urban environments), we thought that the timing of the activity (on the first full day of class in London) would create some sense of imbalance or tension for reflection that could potentially lead to deeper self-understanding.

Prior to the first class in London, students summarized articles on way-finding and spatial mapping (such as Wen, Ishikawa, & Sato, 2011). The group then generated dependent variables to allow them to track their knowledge acquisition about the Tube over time (for example, number of minutes planning their route; map consultations; errors in executing the trip; perceived anxiety, frustration, and confidence in route planning). They operationally defined their variables and designed a datasheet that could be easily completed en route.

We formed teams of four in an attempt to counteract what Ogden (2006) described as the "Flock" or "One hundred-legged American" effect, which occurs when large groups move about as if one body with many legs. Based on their self-reports, team members varied in their levels of experience with public transportation. Because teams included no roommate pairs, this task served to strengthen relationships among students who might not otherwise "hang out" together. We also felt it was prudent on our first day in London not to send students out alone to do this task, especially those students with little to no experience with public transportation and/or dense urban environments. Each group had a set itinerary for the afternoon (for example, "Take the Central Line to Notting Hill Gate. Take a selfie with the Tube sign at street level. Explore Notting Hill; then take the Tube to Victoria Station. Explore Victoria Station. Travel to Oxford Circus. Explore this neighborhood while walking to the Bond Street Tube Station."). We provided minimal instruction on the Tube and discouraged reliance on short cuts (for instance, requesting they not use

phone apps). Instead, we asked them to focus on their own knowledge acquisition process. At the end of the afternoon, we reconvened as a large group to discuss their experiences from the afternoon and address any issues with the dependent variables or data collection process. It was also an opportunity for students collectively to share stories about their first day in London and experience with the Tube.

From this point until the end of this project, students collected data every time they rode the Tube, whether in groups or alone. We pooled the data, and students developed hypotheses and conducted analyses (for example, to examine the correlation between confidence and reliance on others, whether map use decreased over time, and whether self-ratings of sense of direction correlated with number of errors made). The project culminated with a team APA-style research report based on the data. One team demonstrated that, over time, anxiety decreased and confidence in planning and executing Tube trips increased. Another team found that anxiety and frustration were positively correlated and decreased as confidence increased, the number of map checks and anxiety were positively correlated, and reliance on others decreased over time.

The Expertise Project

The second major course project required teams of four to identify and develop an area of expertise concerning some aspect of London and its culture, then prepare a final presentation for the larger group. A primary goal was to allow students to structure their time outside of class to include sites, activities, and experts relevant to their areas of interest. Related goals were to promote group development, minimize over-planning on the part of instructors, and allow for student decompression, relaxation, and reflection during the final phase of the course, all strategies recommended by Ransbury and Harris (1994) to encourage the effectiveness of study abroad courses. Scheduling this project during the last half of the course capitalized on the fact that students had developed a degree of comfort with the city by this point and could manage increased independence.

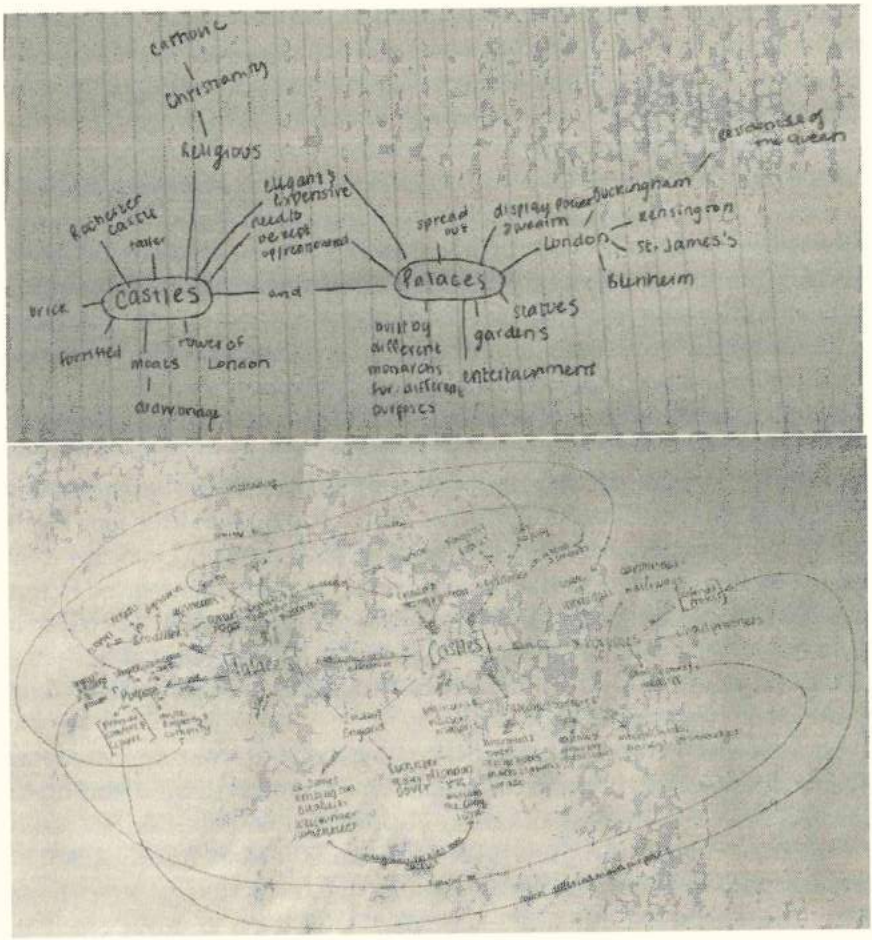
We view this assignment as an example of problem-based learning, where knowledge acquisition occurs in the context of a meaningful but ill-structured problem solving activity (Marra et al., 2014). We did not assign topics, and the task was purposefully ill-structured, in that students would need to contend with multiple or unknown goals, problem-solving methods, and criteria for assessing their own progress. Students were individually and collaboratively responsible for generating a plan for learning, monitoring their progress through self-assessment and

peer assessment, then adjusting their individual and team strategies for learning. The problem at hand was for small groups to identify a topic of mutual interest, narrow the scope to a level that was appropriate to the time constraints involved, develop methods for tracking their individual and group expertise development, and strategize about how best to represent the process of knowledge acquisition so it could be presented to the larger group.

This project was most effective for students who could agree relatively quickly upon a topic that would sustain their interest over a period of time or for students who were willing to adjust their topic appropriately, rather than abandon it, when they realized they had initially taken on too broad or narrow of a focus. Indeed, the latter was an important aspect of metacognitive awareness, understanding that the goal was for students to impose their own structure on an ill-structured topic. Topics ranged widely (Gothic architecture, castles and palaces, pub culture, Harry Potter, Princess Diana). Teams made 45-minute presentations during the last week of class (see Appendix A). An important component of the final presentation was documenting the process of expertise acquisition with individual and team concept maps at different points in time (see Figure 1). The two images show initial (top) and final (bottom) concept maps created by one of the expertise project teams. As students reported in their presentation, these concept maps provide evidence of expertise acquisition as demonstrated by an increase from 23 nodes and two connections to 37 nodes and 8 connections from early to late representation of knowledge about castles and palaces.

Because the project was student-centered, our role as instructors was facilitative; we served in a consulting role rather than dictating the learning activities. We intentionally supported and modeled reasoning processes in regular meetings with each team (D'Abate, Eddy, Costello, & Gregory, 2018). During these meetings, we facilitated group processes and interpersonal dynamics and asked questions to probe students' changing knowledge, though we did not provide content. In fact, even if we had wanted to answer content questions, we could not because we had little expertise in the topics selected. Thus, we played the role of novices and cast students in the role of experts, which helped teams see the kinds of issues and questions that might arise during their final presentations for an audience of novices. The only required content for the final presentations was that they include concept maps of the group members' collective earlier and later knowledge. This was a tool we had discussed and modeled during our on-campus meetings prior to departing for London and examples of them in practice were available in many of the readings (for example, Kinchin et al., 2008)

Figure 1
Sample Student Concept Maps



Below, we describe our data collection methods and provide quantitative data (student self-ratings, as well as instructor ratings) concerning students' achievement of each of the six course learning objectives. We also provide support for our findings using narratives from student reflections.

Method

Participants

Twenty undergraduates (19 females and 1 male) were selected for the course, and all volunteered to participate in the study, which was approved by our IRB, though only 16 completed all measures. Participants received no benefits or payments for their participation. Their ages ranged from 20 to 46, with 18 (90%) of the students being under age 22. The majority were psychology majors ($n = 15$; 75%) or minors ($n = 4$; 20%); other majors included business, nursing, and biology. All students were juniors ($n = 3$) or seniors ($n = 17$), based on credit hours. Their prior travel experience varied widely (for example, from a student who had never been out of the state, on an airplane, or on public transportation to a student who had back-packed by herself in Europe for several weeks).

Materials and Procedures

During the first on-campus class meeting (two days before departure to London), we invited students to participate in the study, which entailed completing brief surveys at three time points and allowing their final reflection papers to be coded after final grades were submitted. In order to minimize pressure for students to participate, they were explicitly informed as part of the consent process that faculty would not access any of the data until after final grades had been submitted; nor were faculty present when students completed the surveys. A student delivered consent forms and completed pre-departure surveys (both in sealed envelopes) to an administrative assistant to be held; the final survey was completed in London and sent back with another student in a sealed envelope. As promised, surveys were not accessed until final course grades were posted.

Self-Ratings

Students rated their achievement of each learning objective (from 1-100, with 1 being *low* and 100 being *high*) at three points. Surveys were given at the beginning of the day on the first on-campus class (time 1), the end of the second and last on-campus class (time 2), and the end of the last class in London (time 3). Eighty percent of students (16 out of 20) completed surveys at all time points.

Instructor Coding

At the end of the course, students submitted reflection papers where

they discussed whether and how they met each course learning objective, using evidence and examples from their experiences in London, course readings/activities, or group discussions (see Appendix A).

Instructors independently rated each student paper on its coverage of the six learning objectives as follows: 1 = *not mentioned*, 2 = *mentioned but with little or no explanation and/or examples*, 3 = *mentioned with some fleshing out*, and 4 = *discussed in a thoughtful way*. Disagreements were resolved through discussion. Satisfactory inter-rater reliability, as indicated by Cohen's kappa, was achieved across five of the six learning objectives: LO1 = .68, LO2 = .79, LO3 = .84, LO4 = .75, and LO6 = .84. LO5 (enhance travel skills) had low reliability (.41) and was not included in any analyses of instructor ratings.

Results and Discussion

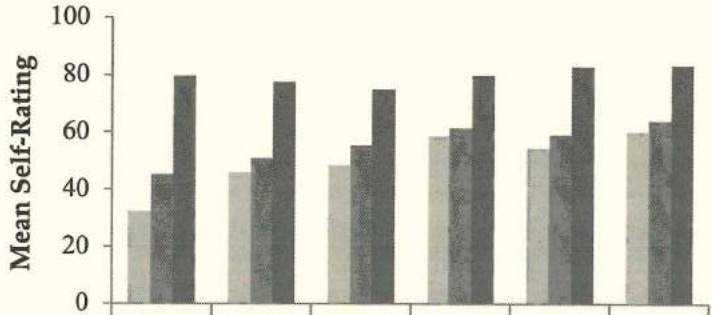
These results provide basic data on the extent to which students and instructors perceived the course learning objectives to be met. Quantitative data are supported and elaborated with comments from student reflection papers.

Students' Self-Reports Over Time

Students' mean ratings for the six learning objectives, over the three time points, are presented in Figure 2. Because the data were not normally distributed, we ran separate non-parametric Friedman's tests for each of the six learning objectives in order to examine whether students perceived improvements in learning over the three time points. We then conducted post-hoc Wilcoxon signed-rank tests separately for each learning objective, with Bonferroni corrections applied, resulting in a significance level set at $p < 0.0125$.

All six Friedman tests indicated significant differences across time points. Students perceived increases in achievement over time for LO1 (understand expertise research and theory): $\chi^2(2, N = 16) = 31.10$, $p < .001$; LO2 (examine everyday behavior with the "eye" of a scientist): $\chi^2(2, N = 16) = 21.80$, $p < .001$; LO3 (conduct data collection and fieldwork): $\chi^2(2, N = 16) = 18.66$, $p < .001$; LO4 (integrate knowledge from everyday behavior with scholarly sources): $\chi^2(2, N = 16) = 11.19$, $p < .01$; LO5 (enhance travel skills): $\chi^2(2, N = 16) = 24.97$, $p < .001$; and LO6 (demonstrate personal growth): $\chi^2(2, N = 16) = 22.69$, $p < .001$. Post-hoc tests revealed significant self-reported improvement (ps $< .01$) for all learning objectives between the initial survey at the beginning of the on-campus class (time 1) and the last class in London (time 3), and also between the

Figure 2
Mean Self-Ratings by Learning Objective (LO) and Time Point



	LO 1	LO 2	LO 3	LO 4	LO 5	LO 6
Time 1	32.19	46.13	48.31	58.75	54.38	60.31
Time 2	45.31	50.81	55.25	61.25	59.06	64.06
Time 3	79.69	77.38	74.94	79.81	82.88	83.25

Note. The learning objectives were as follows: LO1 = understand expertise research and theories; LO2 = examine everyday behavior with the "eye" of a scientist; LO3 = conduct data collection and fieldwork; LO4 = integrate knowledge from everyday behavior with scholarly sources; LO5 = enhance travel skills; LO6 = demonstrate personal growth.

second survey at the end of the on-campus classes (time 2) and the last class in London (time 3). In addition, students perceived a significant increase in achievement between times 1 and 2 (the two on-campus pre-departure classes) for the first learning objective (that is, growing understanding of research and theories about knowledge acquisition and expertise), which was the key focus of these two on-campus days.

Overall, students perceived improvements in learning over time for all course goals. Survey results are supported by many of the examples that students' cited in their final reflection papers (see Appendix B), which will also be discussed below.

Instructor Ratings of Final Reflection Papers

As described above, instructors independently rated each paper on

its coverage of the six learning objectives as follows: 1 = *not mentioned*, 2 = *mentioned but with little or no explanation and/or examples*, 3 = *mentioned with some fleshing out*, and 4 = *discussed in a thoughtful way*. Due to cells with zero frequencies, ratings across the four categories were collapsed into low (ratings of 1 or 2) versus high (ratings of 3 or 4). We ran separate chi-square tests for each learning objective in order to compare rating categories (high vs. low). Figure 3 shows instructor ratings of student final reflections by learning objective (LO) and rating category

Chi-square results showed significantly more high scores than low scores for three of the learning objectives: LO1 (understand expertise research and theories): $\chi^2(1, N = 20) = 9.80, p < .01$; LO4 (integrate knowledge from everyday behavior with scholarly sources): $\chi^2(1, N = 20) = 9.80, p < .01$; and LO6 (demonstrate personal growth): $\chi^2(1, N = 20) = 7.20, p < .01$. The remaining learning objectives, LO2 (examine everyday behavior with the "eye" of a scientist) and LO3 (conduct data collection and fieldwork), which were both related to research methods, showed no significant differences in the proportions of high versus low scores. Below, we discuss these two sets of learning objectives separately and support these findings with students' reflective comments.

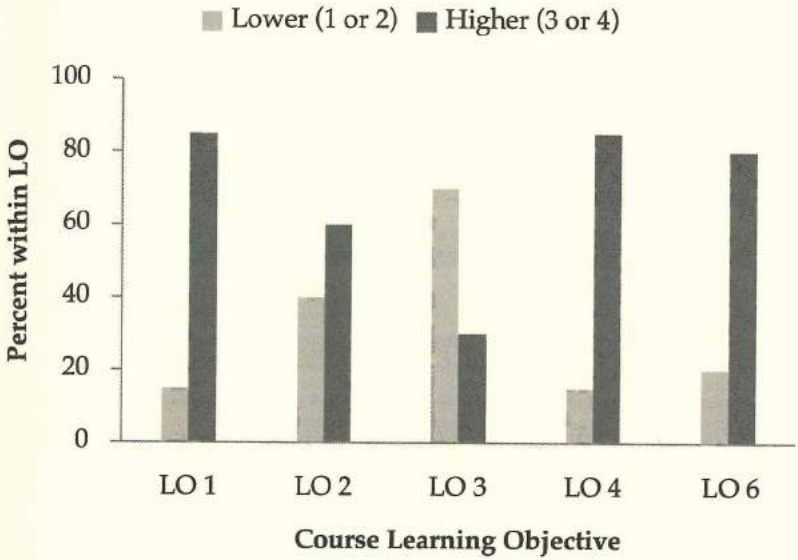
For LO1 (enhanced knowledge of the expertise literature), LO4 ((integrate knowledge from everyday behavior with scholarly sources), and LO6 (demonstrate personal growth), instructors assigned higher ratings with significantly greater frequency (and lower ratings with lesser frequency) than expected by chance ($ps < .01$). Student comments provided additional evidence in support of the quantitative results.

In regard to LO1, one student noted,

> almost all the material and ideas we learned seemed directly applicable: levels of expertise, concept maps, protocol analysis, deliberate practice. . . . However, with the expertise projects that seemed to be more knowledge than practice-based, applying the content we learned in class became more difficult. It seemed that all the material we'd read about appeared to be based on domains requiring practice of some sort, like chess or medicine, which seemed to be nothing like the domain of gothic architecture. Instead, more conceptual and abstract ideas from expertise were applied, which I believe both reflected a deepening of our understanding and an increased ability to integrate what we were experiencing every day to what we learned in the classroom. It meant more reflection, more journaling, and making connections among everything.

For this student, coming to appreciate that knowledge acquisition about gothic architecture reflected general cognitive and meta-cognitive pro-

Figure 3
Instructor Ratings by Learning Objective



Note. The learning objectives were as follows: LO1 = understand expertise research and theories; LO2 = examine everyday behavior with the "eye" of a scientist; LO3 = conduct data collection and fieldwork; LO4 = integrate knowledge from everyday behavior with scholarly sources; LO5 = enhance travel skills; LO6 = demonstrate personal growth. LO5 was removed from analyses due to low inter-rater reliability. Instructor ratings were as follows: 1 = *not mentioned;* 2 = *mentioned with no or minimal examples;* 3 = *mentioned with some fleshing out;* 4 = *discussed in a thoughtful way.*

cesses of elaboration and integration with less emphasis on practicing a skill seemed to positively impact her ability to integrate course content with her daily life in London.

Another student tied what she was learning from the expertise literature to her personal behavior (LO4):

> While studying the articles that we read before class began, I was worried that I was not truly understanding them because I did not know how to apply them to my life. I do not consider myself an expert in anything, so I found myself struggling to

> fully understand what the articles were outlining, such as how expertise is acquired after 10 years, how one must have interest in a domain, how one must deliberately practice to improve, and so on. . . . It was not until we had been there awhile that I finally began to understand. It may sound silly, but everything clicked for me one morning when I was putting my contacts in. I realized that I have been using contacts for over 10 years and am able to solve nearly every problem that can occur with them. In a strange way, I am an expert in my contacts. After this revelation, I found myself better able to understand the concept of expertise on a deeper level because I was able to relate it back to myself.

Likewise, another student described her intentional use of deliberate practice to improve her expertise:

> I was motivated to learn how to take the Tube because I wanted to explore London and because I like the independence of traveling on the Tube instead of a cab or an Uber, but reading the scholarly sources before coming to London put expertise development into perspective. No matter how hard I tried or how much time I spent taking the Tube, I could not make myself become an expert in one month. But, I was not deterred in my desire to become confident while taking the Tube, so I began dallying in deliberate practice. The first few days I took the Tube in a group, and after I got confident with that I began taking the Tube at night, then alone, and then further and further out in Zone 2. Every few days, after I got comfortable with a new skill or aspect of taking the Tube, I would try something different in order to expand my knowledge on it and on my ability to take it, instead of simply honing my skills and plateauing in my development.

While deliberate practice is a well-documented tool in the expertise literature, we were especially pleased to read evidence that students applied it to their everyday activities in London. To master the Tube is to know London as a Londoner does, providing one form of immersion in the culture. Not only did this student practice her Tube skills deliberately, but also she provided evidence of assessing her behavior in context and of active meta-cognitive assessment of her own learning. These latter two skills are relevant in any learning context and, we would argue, especially in contexts of transition, such as studying abroad or starting a new job.

Many students also reported examples of personal growth (LO6) over the course. The comments coded for this theme reflected the variability in the students' experiences at the start of the course (for example, in terms of age, year in school, past travel, living in close contact with peers, being away from family and friends). One student explained,

> I had only traveled with my family before, and in that former position as a child with two able, leading parents always making decisions, this trip was new in that I was allowed to be a contributing individual. I could make suggestions for trips, plan routes for group travel, and have a vote when appropriate. With all this freedom, however, came a need for communication with others. Over time on the trip, there were discomforts, weariness and fatigue from peers, and homesickness throughout. Traveling with a group for me meant communicating by reaching out and making sure someone was okay if they seemed off and isolated, or consistently didn't want to go out with the group. It meant making sure everyone was okay about the choice and location for dinner, or offering something they'd forgotten to bring or needed to use.

Another student offered this comment:

> While on this trip I took time to reflect over my entire college career and grasped the thought that I am graduating college. According to Hallam (2010), this would be a point of transition in my life. . . . I am changing my learning environment and I have numerous emotions flying through my head. If anything, this last month as taught me that I am capable of more than I thought. Being in a foreign country for a month outside of my comfort zone was the best way I could think of transitioning into "real world." I will be tested time after time again and must find my way through obstacles that come my way. But, the most rewarding part of this trip was the friendships that I have built.

The remaining learning objectives, LO2 (examine everyday behavior with the "eye" of a scientist) and LO3 (conduct data collection and fieldwork), were both related to scientific methods and showed no significant statistical patterns of low versus high instructor ratings. These results could signify less student achievement for this goal by the end of the course, or they could reflect more variability in student responses than other learning objectives, because students varied in major area of study and number of research methods courses taken. These results could also suggest that students were less able to reflect on and provide examples in these areas.

Some students indicated that they found these goals differentially difficult to achieve. For instance, when reflecting on LO2, a student noted, "Learning how to look at everyday occurrences like a scientist was something that I had to make an effort to do and I feel as though this is an area that I have the most growth left to do in. When trying to think like a scientist about everyday behavior and things I saw I realized that

there are things that I notice that I may not necessarily think would count as scientific but are." Similarly, in regard to LO3 (conduct data collection and fieldwork), another student explained,

> I am used to collecting data from others, and almost never from myself. The Tube project was challenging for me in ways of introspection, multitasking, and memory. While traveling the tube and trying to figure out which platform to get off at, it was difficult to pull out and record data. The first few trips I tried without success, and ultimately had to record all my information after the trip was over. Since I decided to go about in this way, it meant I had to draw upon memory of trip legs, which could have happened over 20 minutes ago. Eventually as I became familiar with the transportation system, recording my data could be completed while on the tube. . . . I now know just how hard it can be to record data while completing an unusual task, and that it takes time to be able to become familiar enough to be able to record without significant performance reduction.

In spite of the variability in students' experiences with the science of psychology and the fact that some students reported these learning objectives to be challenging to achieve, a number of students provided interesting examples of how they achieved these goals. When discussing their improved ability to examine everyday behavior with the "eye" of a scientist (LO2), several students mentioned their enhanced observational skills, particularly in the context of "people-watching" on the Tube. Students reported looking "for things that made them stand out as expert." For example, one student noted, "I was able to pick up on the little things experts would do compared to novices. For instance a novice on the Tube would fall over when the Tube moved and have their maps out instead of looking at the one on the Tube. Their attention was focused on getting to the right stop and being able to keep their balance. However, experts apply less mental effort and are able to sleep, read, listen to music and still manage to get off on the right stop." Another student commented, "My favorite expert by far was this woman who I spotted on my second or third day in London. She sat down on the train and pulled out her makeup bag and started applying her eye shadow and mascara, and I was just blown away. The train movements did not seem to faze her in the slightest, and her makeup looked flawless."

Students were also able to apply their observational skills to the experts they met. One student discussed her realization later in the course that the purpose of having tour guides at the different destinations was not just to have them show us around: "As I reflect back on it now I realized that the

tour guides were an example of experts, all in different domains." Other students reported similar realizations, such as "Some things were more intentional, such as the Blue Badge Guide explaining her process to become a guide, but I realized there are experts everywhere!" and "Additionally, for each tour guide I met, I tried to examine their speech for signs of expert level status, such as broad thinking and grasping of overall patterns as opposed to the detail-oriented and rule-following cognitions of a novice. These connections are ones I would not have made prior to this class."

Several students mentioned the tour guide at a brewery (not part of the course curriculum, but on the itinerary for the "pub culture" team project). One student explained, "Sue was a chemistry teacher for 25 years and was offered a tour guide position at the brewery because she was able to explain the science side of brewing and knew all the history behind the brewery. She has the time requirement needed in order to be an expert and really knows her facts. If this course wasn't about developing expertise, and I didn't know anything about this topic beforehand, I would not be able to pick out the novice from the expert, or even see the development of my own expertise." Another student mentioned, "When I went to the Tower of London, the Beefeater led us on a tour and was clearly an expert, as he had served in the military for 40 years." This student also commented on other experts, such as "Dave the bus driver, cooks, and street performers, as well as [artifacts from] historical figures such as Van Gogh, Leonardo, and the Beatles [from our visit to the British Library Treasures Room]. Even while I read for pleasure I noticed the sleuthing expertise of Sherlock Holmes. . . ."

Overall, these data suggest that both students and faculty acknowledged expertise development over time in regard to the stated learning objectives. All students improved or perceived improvement in at least some areas. Further, their final papers indicated that they were able to reflect on the process of knowledge acquisition and apply psychological principles to their everyday behaviors in ways they had not previously considered. This is especially apparent in one student's description of her experiences over time:

> I have begun to notice the integration of landmark knowledge and survey knowledge that Wen et al. (2011) discussed in their paper. . . . At first I did not know how to approach examining myself as an expert or how I could view myself in the lens of a scientist but, as the days went by, I started to realize that I use a lot of landmark knowledge. Like on the first day of venturing on the Tube, a group of us got off at Lancaster Gate and automatically turned left thinking that our hotel was that direction. However, I noticed a group of four red telephone boxes that I

> noted were to the left of the hotel. Therefore, we were going further away from our hotel and so we had to turn the opposite way. . . . Examining myself as an expert of London was brought up again on my last day in the city. I had just climbed 579 steps to the top of St. Paul's Cathedral . . . and could see all over the city of London. It was beautiful and magnificent, but what really made me proud was using my landmark knowledge one last time. . . . After seeing the River Thames and pointing out the Tower Bridge, I was able to backtrack along the river and point out the Millennium Bridge before recognizing staple landmarks like the Tate Modern and Globe Theater. By the Tower Bridge, I was able to identify the Tower of London near it as well. The London Eye and Big Ben were hard to miss, and, from experience, I knew that Westminster Abbey was nearby. This allowed me to integrate all the historical places we had been over the past month and place it within the confines of other landmarks.

Taken together, these findings from student self-report surveys and instructor ratings provide some converging evidence that course objectives were met. These results must be interpreted with caution due to our small non-representative sample and the self-report nature of the data. One challenge with the data is that several of our learning objectives were related and included overlapping elements relevant to research concepts, methods, and applications (for example, LO1, understand expertise research and theories; LO2, examine everyday behavior with the "eye" of a scientist; LO3, conduct data collection and fieldwork; LO4, integrate knowledge from everyday behavior with scholarly sources). This overlapping may have influenced the ways in which students discussed their experiences. It may have accounted for lower reliability in instructor ratings for LO1, because students mentioned expertise research and theories in other sections of their reflections that might have otherwise counted toward achievement of this objective. In the future, it would be useful to isolate these elements into more clearly defined learning objectives.

Our primary goal here is to provide suggestions for assessing student learning in a study abroad course and to promote the use of multiple methods. Another goal is to encourage instructors to consider including reflection in their study away course, particularly reflection on knowledge acquisition and meta-cognitive skills (Bowman, Frame, & Kennette, 2013), because these are recommended in the study away literature as enhancing learning outcomes (for example, Coryell, 2013; Spencer et al., 2005). Student reflections are a rich source of data, and they provide students with focused opportunities to stop and make meaning out of their experiences. Though space constraints limited what we could include

from student reflections here, we found many examples of how students were able to make meaningful connections between the course activities, the London context, and their past learning in psychology (for instance, Schwebe & Carter, 2010).

Conclusions

Although our findings are based on a study away psychology course focusing on the particular content area of expertise, students in any course can benefit from actively reflecting on their own knowledge acquisition in a novel domain. Within psychology, using the approach outlined here, instructors can encourage students to apply to the context at hand principles they should be learning as part of any psychology course (for example, how learning works, the critical role of practice, skill acquisition, the challenges of transferring knowledge across domains, application of learning from one course to another or to real-world tasks). The assignments we described can be adapted to help students think like scientists in understanding their own learning and experiences. This includes helping students distinguish between using anecdotal evidence based on their own experiences and collecting data on themselves using empirical methods, both quantitative and qualitative in nature. It also includes challenging students to make the implicit *explicit*. Having students actively examine the process of knowledge acquisition in the context of a new domain allows them to unpack the implicit components and become aware of the metacognition, and even metaemotions, involved in learning (for example, the transitions involved in developing expertise, as described by Hallam, 2010).

The assignments we have described were designed to highlight the executive control skills involved in learning something entirely new. For example, the role of deliberate practice can be fully understood only when one understands what skill acquisition entails and how it develops over time. Because of the many layers of novelty afforded by the experience (being in a different country, living in a large cosmopolitan city, using public transportation, understanding local customs, adjusting to new accents and vocabulary), students also had ample opportunities to reflect on the emotional aspects of learning as well as the progression of knowledge acquisition while working in a team.

The learning benefits we have described are not limited to the domain of psychology, however. The course projects could be modified to work with other disciplinary content, especially if the disciplinary context was presented in the context of problem-based learning (for example, Marra et

al., 2014) while still emphasizing effective group dynamics (Duke, 2014; Ransbury & Harris, 1994) and embedding the academic content into everyday cultural experiences in the host country or city. Projects could be structured in such a way as to allow faculty to provide ongoing mentoring and feedback on teamwork and effective group practices (D'Abate et al., 2018). In our case, the emphasis on expertise and knowledge acquisition provided a built-in mechanism to encourage students to reflect on their learning in context. But, again, reflection can be built into class activities in any discipline in intentional ways (Perry et al., 2012; Walters et al., 2017). It is the intentionality of the reflection as part of the academic content of the course that facilitated the meaningfulness of this short-term study away experience for our students and for us as instructors.

References

Bowman, M., Frame, D. L., & Kennette, L. N. (2013). Enhancing teaching and learning: How cognitive research can help. *Journal on Excellence in College Teaching, 24*(3), 7-28.

Chang, W. (2007). Cultural competence of international humanitarian workers. *Adult Education Quarterly, 57*(3), 187-204. doi:10.1177/0741713606296755

Chieffo, L., & Griffiths, L. (2009). Here to stay: Increasing acceptance of short-term study abroad programs. In R. Lewin (Ed.), *The handbook of practice and research in study abroad: Higher education and the quest for global citizenship* (pp. 365-380). New York, NY: Routledge.

Coryell, J. E. (2013). Learning on-location: Evaluating the instructional design for just-in-time learning in interdisciplinary short-term study abroad. *Journal on Excellence in College Teaching, 24*(2), 5-31.

D'Abate, C., Eddy, E. R., Costello, M., & Gregory, P. I. (2018). A next step in student teamwork pedagogies: Teaching and supporting teamwork dynamics. *Journal on Excellence in College Teaching, 29*(2), 73-101. Retrieved from http://celt.muohio.edu/ject/issue.php?v=29&n=2

Duke, S. T. (2014). *Preparing to study abroad: Learning to cross cultures..* Sterling, VA: Stylus.

Earnest, D. R., Rosenbusch, K., Wallace-Williams, D., & Keim, A. C. (2016). Study abroad in psychology: Increasing cultural competencies through experiential learning. *Teaching of Psychology, 43*(1), 75-79. doi:10.1177/0098628315620889

Engle, L., & Engle, J. (2003). Study abroad levels: Toward a classification of program types. Frontiers: *The Interdisciplinary Journal of Study Abroad, 13*, 1-20. Retrieved from http://www.frontiersjournal.com/issues/vol9/vol9-01_engleengle.pdf

Ericsson, K. A., Charness, N., Feltovich, P. J., & Hoffman, R. R. (Eds.). (2006). *The Cambridge handbook of expertise and expert performance.* New York, NY: Cambridge University Press.

Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive-developmental inquiry. *American Psychologist, 34*(10), 906-911. doi:10.1037/0003-066x.34.10.906

Gammonley, D., Rotabi, K., & Gamble, D. (2007). Enhancing global understanding with study abroad: Ethically grounded approaches to international learning. *Journal of Teaching in Social Work, 27*(3/4), 115-135. Retrieved from http://www.informaworld.com/openurl?genre=article&id=doi:10.1300/J067v27n03_08

Hallam, S. (2010) Transitions and the development of expertise. *Psychology Teaching Review, 16,* 3-32.

Herbers, M. S., & Mullins Nelson, B. (2009). Using the disorienting dilemma to promote transformative learning. *Journal on Excellence in College Teaching, 20*(1), 5-34. Retrieved from http://celt.muohio.edu/ject/issue.php?v=20&n=1

Kinchin, I. M., Cabot, L. B., & Hay, D. B. (2008). Visualising expertise: Towards an authentic pedagogy for higher education. *Teaching in Higher Education, 13,* 315-326. doi:10.1080/13562510802045345

Koernig, S. K. (2007). Planning, organizing, and conducting a 2-week study abroad trip for undergraduate students: Guidelines for first-time faculty. *Journal of Marketing Education, 29*(3), 210-217. Retrieved from http://dx.doi.org.ezproxy.plu.edu/10.1177/0273475307306886

Kuh, G. D. (2008). *High impact educational practices: What they are, who has access to them, and why they matter.* Washington, DC: Association of American Colleges and Universities.

Marra, R., Jonassen, D. H., Palmer, B., & Luft, S. (2014). Why problem-based learning works: Theoretical foundations. *Journal on Excellence in College Teaching, 25*(3&4), 221-238. Retrieved from http://celt.muohio.edu/ject/issue.php?v=25&n=3%20and%204

Mezirow, J. (1991). *Transformative dimensions of adult learning.* San Francisco, CA: Jossey-Bass.

Ogden, A. C. (2006). Ethnographic inquiry: Reframing the learning core of education abroad. *Frontiers: The Interdisciplinary Journal of Study Abroad, XII,* 87-112.

Perry, L., Stoner, L., & Tarrant, M. (2012). More than a vacation: Short-term study abroad as a critically reflective, transformative learning experience. *Creative Education, 3,* 679-683.

Ransbury, M. K., & Harris, S. A. (1994). Study abroad: The reality of building dynamic group learning. *Journal on Excellence in College Teaching, 5*(2), 97-107.

Schwebe, D. C., & Carter, J. (2010). Why more psychology majors should study abroad. *Psychology and Education, 47*, 17-21.

Shupe, E. I. (2013). The development of an undergraduate study abroad program: Nicaragua and the psychology of social inequity. *Teaching of Psychology, 40*(2), 124-129. doi:10.1177/0098628312475032

Spencer, S., Murray, T., & Tuma, K. (2005). Short-term programs abroad. In J. Brockington, W. Hoffa, & P. Martin (Eds.), *NAFSA's guide to education abroad for advisers and administrators* (3rd ed.; pp. 373-387). Washington, DC: NAFSA: Association of International Educators.

Stoloff, M. L., Good, M. R., Smith, K. L., & Brewster, J. (2015). Characteristics of programs that maximize psychology major success. *Teaching of Psychology, 42*(2), 99-109. doi:10.1177/0098628315569877

Study Abroad Data. (2018, March 6). United States Department of State USA Study Abroad website. Retrieved from https://studyabroad.state.gov/value-study-abroad/study-abroad-data

Taylor, C. (2011). *Londoners*. New York, NY: Harper Collins.

Walters, C., Charles, J., & Bingham, S. (2017). Impact of short-term study abroad experiences on transformative learning. *Journal of Transformative Education, 15*(2), 103-121.

Wen, W., Ishikawa, T., & Sato, T. (2011). Working memory in spatial knowledge acquisition: Differences in encoding processes and sense of direction. *Applied Cognitive Psychology, 25*, 654-662. doi:10.1002/acp.1737

Marianne G. Taylor *received her Ph.D. (1993) in Developmental Psychology from the University of Michigan and her A.B. in Psychology (1986) from Smith College. She is currently a Professor of Psychology at Pacific Lutheran University, where she has been a faculty member since 2003. Her teaching interests include statistical methods, research methods, child development, gender development, capstone, and study away. Her research interests focus on the intersection of children's cognitive and social development. She studies topics including children's beliefs about social categories, such as gender, and how children assess the information provided by others when they are acquiring new knowledge.*
Wendelyn J. Shore *received her Ph.D. (1991) and M.S. (1988) in Cognitive Psychology from the University of Oklahoma and her B.A. in Psychology (1986) from Coe College. She is currently a Professor of Psychology at Pacific Lutheran University, where she has been a faculty member since 1999. Her teaching interests include statistical methods, research methods, cognitive psychology, consciousness, capstone, and study away. Her research interests include: partial knowledge of word meanings and vocabulary acquisition, ethics and developmentally appropriate mentoring of undergraduate students, and the role of character strengths in mentoring relationships.*

Appendix A
Selected Course Requirements
(as described in syllabus)

1. **Field Notes** (multiple brief entries per day): These are notes you take while out on a guided tour or while traveling around the city. These will form the basis of the required Tube paper and your final expertise presentation. You should have a small, sturdy notebook that you can keep in a purse or pocket for this purpose.

2. **Journal & Midpoint Reflection** (thoughtful entries each day or two): The travel journal is where you record more complete thoughts, observations, and questions. It is where you go to process all the new information that is flooding in and where you begin to make sense of it (besides talking with your fellow travelers). Unlike the field notes book, the journal contains full thoughts and is more like a diary of your experience. You will NOT be required to upload your journal entries, so you can include personal information or reflections. However, your journal must also include material related to your Tube Paper, Expertise Project, and Final Reflection Paper (assessment of learning objectives).

   This is where you should record important pieces of information in classroom lectures, your reactions to the lectures and to the sites we visit, and the connections you are making between the formal class activities and your own acquisition of knowledge about London, the Tube, and your research topic. This is also where you should include honest assessment of your participation and your progress in meeting the learning objectives for the class. You might include examples of how you are actively contributing to the positive functioning of the group. You might also discuss challenges that arise, along with potential solutions to demonstrate your problem-solving strategies.

   The journal should be full of connections, whether they are connections between what different lecturers have said, things you have read, things you know from other experiences, things you saw on the street that caused you to step back and think – in other words, your experience of the trip. Although not formally graded, these notes will be invaluable to you as you complete the Tube research report, your group presentation, and your final paper. As with your field notebook, spiral notebooks are not sturdy enough for these purposes; use a bound lab notebook.

   Note: Although we will not ask you to turn in your journals, at the midpoint of the course, we will ask for a reflection on your experiences. We will discuss these as a group in order to help you prepare for the final reflection paper.

Appendix A (*continued*)
Selected Course Requirements
(as described in syllabus)

3. **Team Tube Papers** (5-7 pages): In teams of four, you will report results from the class's combined data on learning to navigate the Tube in an APA-style research report (with title page, abstract, intro, methods, results, discussion, references, and relevant tables and/or figures). The introduction and discussion should be heavily influenced by the scholarly literature (with a minimum of five empirical journal articles), supplemented with personal observations from your team members' field notes and/or journals. You should formulate clear hypotheses about expertise acquisition, explain your rationale using scholarly sources, and discuss whether our class data provides support for your hypotheses. You should discuss both ***qualitative*** (e.g., discussion of themes that emerge in your field notes and journal; evidence from protocol analysis at several different points in time; evidence from the map drawing task) and ***quantitative measures*** of expertise acquisition (e.g., relevant analyses of numeric data). Each member of the team is expected to contribute to ALL subsections of the paper as well as the final editing. You will receive a common grade for this assignment.

4. **Expertise Project Group Presentations** (45-minute presentation with slides): For these projects, you will form teams of four focused on a common area of interest related to London culture. The idea is for each team to structure some of your free time to explore sites related to your expertise project topics. You should create individual concept maps at different points and keep records of your knowledge acquisition in your journals throughout your time.

   For the presentation, your team will describe your group project, including relevant scholarly literature (at least 5 empirical journal articles; you may include additional sources), results based on data collection (qualitative and/or quantitative), and highlights of what you've learned, seen, and experienced. Like the Tube Paper it should be heavily influenced by the scholarly literature, supplemented with personal observations documented in your field notes and journal. In your presentation, you should show us at least some of your individual and joint concept maps to document changes in your expertise over time.

5. **Final Reflection Paper** (3-5 pages): You will write a final reflection paper discussing the learning objectives for the course and the extent to which you accomplished them based on your experiences in London and our class activities, discussions, and readings. You should provide evidence whenever possible. For instance, when discussing Learning Objective #3, you might talk about what you learned about data collection in the field based on the kinds of errors you made or the challenges you faced in collecting these data. The paper should draw heavily on your field notes and travel journal, and it should be full of connections between academic and experiential content. It should provide evidence that you have thought critically about your learning as it relates to the course objectives; it is NOT intended to be a travel narrative but rather a scholarly paper. You will be graded on your *thoughtful reflection and assessment*, not simply whether or not you met each learning objective for the course.

Appendix B
Examples of Student Comments, by Learning Objective

Learning Objective	*Supporting Comments From Student Reflection Papers*
LO1: Understand expertise research and theories	"While I would need at least 10 years to study and live in London in order to be an expert on anything that has been studied the last month (Cambridge Ch. 3), my knowledge of various aspects of the city has increased since the beginning of the month." "A major part of my learning was acquiring knowledge in the domain of expertise in many different ways. Before this class I had no idea that expertise entailed so much. For instance the Proficiency Scale by Chi (2006) explained all the levels you have to reach before you become an expert. Starting this class I was novice in almost all of the domains."
LO2: Examine everyday behavior with the "eye" of a scientist	"We quantified our experience, something that is seemingly unquantifiable, with Likert scales. This made me realize that even in everyday situations, there is usually a way to operationally define things in order to be able to measure them." "While listening to their guides I was capable of analyzing their performance and rate the outcome (Ericson, 2006)…using the retrospective method, which states that an expert is determined based on the outcome of their product. The better their tour the higher the rating."
LO3: Conduct data collection and fieldwork	"The Tube project was the first time I have collected qualitative data, played the dual role of researcher and participant, and collected data in a field outside of my typical stomping grounds. I learned that it is more efficient, accurate and easier to jot down data and notes while on site, rather than going back after a trip and trying to remember details." "I learned that qualitative data, while sometimes harder to sort out than quantitative, provides valuable insight into research by revealing common thematic elements."

LO4: Integrate knowledge from everyday behavior with scholarly sources	"I looked at the information in a deeper way than I ever had before, seeing it as not just the magical world of Harry Potter, but the web of connections of the concept map I was mentally building. Concept mapping was a way to show the understanding I had about Harry Potter and the amount of growth that I had from my initial concept map to my final concept map was exponential. Kinchin [et al., 2008] talks about how concept maps are the window to the mind." "It is easy to tell the experience level of a tour guide based on their knowledge. This can be seen when the guide is giving the tour. It is likely the more fluent their speech, the longer they have been doing it. After enough repetition, the speeches start to become more automatic. Automaticity is one contributing factor when evaluating an expert (Ericson, 2006). Researchers have also determined that in order to become an expert, it takes at least ten years to build the necessary skills."
LO5: Enhance travel skills	"In the mid-point reflection paper, I focused solely on the type of skills that you could find in any traveler's blog, such as budgeting or making the most of your trip time. What I came to find in real life though, was that communication with others was one of the biggest skills I'd acquired on the trip." "I also feel as if I have more confidence, which is related very strongly to travel. With confidence, travelers can commit and make decisions, such as choosing when to cross a busy road or how to approach a stranger with a question."
LO6: Demonstrate personal growth	"I felt as if I had a strong sense of teamwork but during the expertise project I reached out of my comfort zone and took on a more leader role." "I have gotten to know myself even better. I never would have thought that I would become passionate about how learning and expertise occurs or about pub culture. This study away course brought me closer to classmates who I likely would not have interacted with outside of my major classes." "One of the biggest lessons I have learned from this unique experience in London is that if you are looking you can find something in common with anyone, even the most unlikely person you could imagine."