

# Experiential Behavioral Economics Courses: Practical lessons learned from the Middle East

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## Abstract

*This paper presents the development and implementation of experiential behavioral economics course in three Middle East universities. Experiential learning has proven to have many benefits for students because of putting them at the center of the learning process and allowing them to learn by doing. More specifically, as part of the practical sessions, students were tasked to design, implement and report on one field experiment conducted in collaboration with a nudge unit. We believe that this approach whereby students apply their knowledge through experimentation to address issues relevant to their communities and environment can be more effective and impactful than traditional teaching or relying only on classroom-based experiments. In this paper, we share the lessons learned from the journey of delivering several experiential behavioral economics courses.*

**Keywords:** teaching behavioral economics, experiential learning, field experiment, nudge.

The authors report there are no competing interests to declare.

## Introduction

Behavioral economics, most briefly defined as a study of cognitive and behavioral principles underlying economic decision-making, has been gaining traction globally in private and public sector. In the private sector, companies trying to be at the forefront of behavioral science application are hiring chief behavioral or scientific officers and setting up behavioral science units within their organizations (Guntner, Lucks & Sperling-Magro, 2019). At the policy level, past decade has witnessed impressive growth of interest in behavioral public policy, reflected in increased number of studies and interventions, as well as the formation of numerous so-called “nudge units<sup>1</sup>” around the world (Strassheim, 2020). This is thanks in large part to the contributions of prominent experts, such as C. Sunstein and Nobel laureate R. Thaler, and their seminal 2008 book *Nudge* (Thaler & Sunstein, 2008).

Institutions of higher education are taking note, recognizing the need to expose students to new scientific theories, but also to practical applications from the field. According to some authors, behavioral economics has become an integral part of economics education, being frequently reported as part of the literature on the

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<sup>1</sup> Nudge units are organizations or departments within governments that apply behavioral insights and experimentation to inform (public) policies; also called behavioral insights units (BIU)

history and development of economic thought (Geiger, 2017). Many universities are setting up behavioral science initiatives within economics, psychology, business, and public policy departments. They are also adding innovative, multidisciplinary behavioral economics courses to their curricula, to improve the teaching of economics, which is rapidly developing into experimental science (Kaplan & Balkenborg, 2010; Becker, 2004).

The most notable of these courses are ones that employ experiential learning techniques to equip students with knowledge in an integrated process of experience and concepts, observations, and action (Austin & Zeh Rust, 2015; Kolb, 1984). These courses provide students with a foundational understanding of behavioral economics through experiential education, in which they take that knowledge and apply it to a real-world setting. Students examine how their own assumptions of rationality and decision-making match the existing literature and apply those observations to the design of a field experiment. This approach is supported by “reflection, critical analysis and synthesis” within the course that is essential for gaining new knowledge and skills (Itin, 1999). Experiential learning is linked to improved retention, engagement, reasoning, problem solving and decision-making skills (Bucher & Patton, 2004; Millenbah and Millsbaugh, 2003; Kuh, 2008; Eyler, 2009; Coker, 2010; Knecht-Sabres, 2010). There is also some evidence pointing to significant improvement in course performance of students involved in experiential practice such as simulation or experimentation (Campbell & McCabe, 2002). Moreover, over the last two decades, experiential learning proved to be relevant pedagogical tool in improving the quality of teaching economics through field and classroom experiments (Tila, 2020; Castilla, 2014; Balkenborg & Kaplan, 2010; Egbert and Mertins, 2010, Hawtrey, 2007; Watts & Becker, 2008).

In this article we will describe the development of experiential courses in behavioral economics, delivered to universities in the Middle East region and carried out by two regional nudge units, namely B4Development<sup>2</sup> (B4D) and Nudge Lebanon. Together, the units pioneered an applied/academic approach across three universities in the Middle East. Indeed, universities like Hamad Bin Khalifa University (HBKU) in Qatar, the American University of Beirut (AUB) and the American University of Kuwait (AUK) are leading this effort to train the next generation of behavioral economists, policymakers, and business leaders.

The purpose of this article is to share lessons learned with an example of a semester-long course consisting of a field experiment conducted in collaboration between university and the nudge units, and targeting mostly economics students at graduate and undergraduate levels.

## **Course Content**

The courses were split into two parts. In the theoretical session, students gain the foundational understanding of behavioral economics, whereas in the practical “lab” sessions, they design and implement experiments.. The timeline and relevant course milestones are presented in Table 1. The theoretical part

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<sup>2</sup> formerly the Qatar Behavioral Insights Unit

typically starts with an introduction about economic history and key concepts of classical and neo-classical economics. It presents the traditional (normative) economic models of decision-making, then transitions into descriptive behavioral models that are better able to predict how individuals make judgements, decisions, and choices. Students learn about Kahneman and Tversky’s seminal work on prospect theory (1979, 1992) along with other theories of decisions under risk and uncertainty; anomalies in inter-temporal choice and time discounting (e.g. hyperbolic and quasi-hyperbolic discounting), and mental accounting (Thaler, 1985). Class discussions cover dual system thinking in addition to a number of heuristics and biases such as loss aversion, anchoring, representativeness, and present-bias, exploring how these influence decision-making.

TABLE 1.

Timeline & Milestones of the Course

Description of the 14-week timeline and milestones for designing, implementing and evaluating the field experiments in accordance with the IDIAS methodology

<b>Theory Session</b>	<b>Weeks</b>	<b>Experiment Milestones</b>	
History of economics and psychology from the 19th to the 21st century  Differences between neo-classical, experimental, and behavioral economics (theory and evidence)	1	<b>Identify the challenge</b>	Class discussion about the curated intervention ideas
	2		Students choose among curated experiments and form groups
	3		Students meet with coaches to define the challenge and key objectives of an intervention Students complete a literature review to guide design process
	4		Students develop a behavioral map, and identify stakeholders and the nudge or other behavioral tool they want to test Students generate hypothesis to test
Nudge theory and frameworks (SHAPE DIFFERENCE)  Nudge units and tools (e.g., behavioral map)  Impact Evaluation methods (e.g., designing RCTs)	5	<b>Design the intervention</b>	Students engage with key stakeholders to discuss the intervention idea and seek their approval Students develop a blueprint design (i.e. impact evaluation method, experiment duration, target sample size and outcome measure) and submit proposal to IRB for approval (if necessary)
	6		Students finalize design proposal based on IRB feedback
	7		Coaches provide feedback on design proposal and adjust implementation plan if necessary Students continue to engage with key stakeholders to negotiate implementation of field experiment

Ethics of nudge and behavioral public policy	8	Implement the intervention	Students implement field experiment, collect data, monitor experimental conditions and document any issues, adjusting if needed
	9		
	10		
	11		
	12		
	13	Analyze the data	Students work under supervision of coaches to run the appropriate statistical analyses and prepare results in report
14	Submit final project	Present final project results in class that summaries experimental design, insights, findings and recommendations	

Instructors expose students to well-known lab and field experiments that demonstrate how psychological mechanisms may influence behavior and violate the concept of economic rationality. For example, to illustrate the anchoring effect, instructors replicate the study conducted by Strack & Mussweiler (1997) in which different groups of participants were exposed to low and high anchors, and then asked to guess Mahatma Gandhi’s age when he died. Results from two of the university courses are shown in Table 2.

TABLE 2.  
Summary of Anchoring Effect Exercises in two universities

	<i>High Anchor Group (in years)</i>	<i>Low Anchor Group (in years)</i>
<i>HBKU, 2017</i>	83	71.7
<i>AUB, 2018</i>	82.5	67

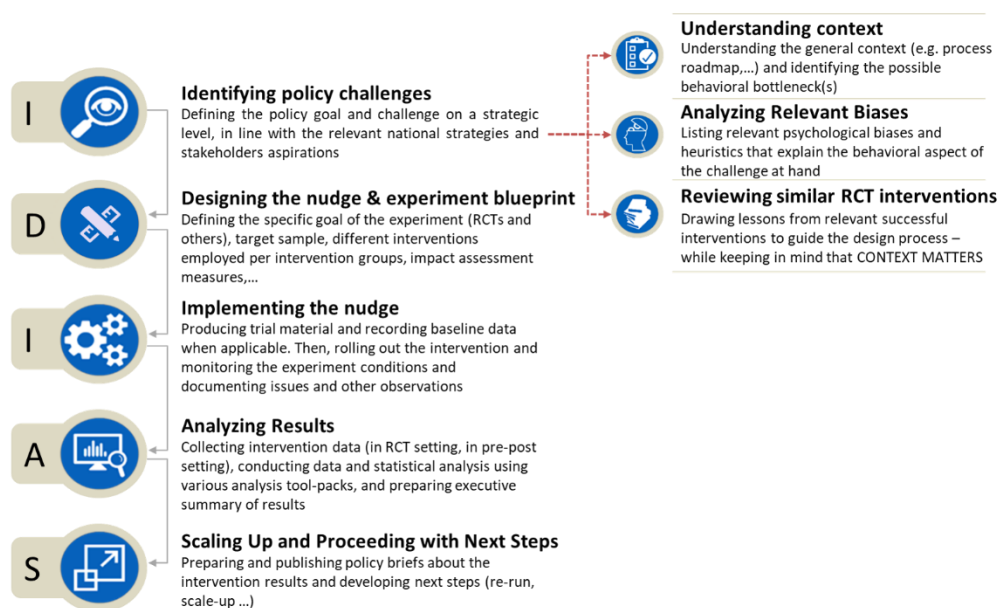
*The same exercise was conducted in the two universities, students in the ‘High Anchor Group’ were exposed to ‘140’ as their anchor while students in the ‘Low Anchor Group’ were exposed to ‘9’ as their anchor. The variation in the average number of years given by the two groups illustrate the concept of anchoring effect.*

The main resources used throughout the courses include the books *Nudge* (Thaler and Sunstein, 2008), *Misbehaving* (Thaler, 2015), *A Course in Behavioral Economics* (Angner, 2016) and *Thinking, Fast and Slow* (Kahneman, 2011). Additional readings are provided from various behavioral economics textbooks. These resources help students easily digest how individuals often fail to be rational decision makers due to biases and heuristics and offer examples of experiments that tested “nudges” to address policy challenges with behavioral roots, which get students to think about their own field experiment for the final project. Students also learn about various nudging frameworks and checklists, such as B4Development and Nudge Lebanon’s

“SHAPE DIFFERENCE”<sup>3</sup> framework, as well as BIT’s “MINDSPACE”<sup>4</sup> and “EAST”<sup>5</sup> frameworks, to help them incorporate behavioral tools and insights into their experimental design.

During practical “lab” sessions, students work in groups to design, implement and evaluate their own field experiment. Typically, instructors divide students into three to five groups depending on class size (ideally 15 to 20 students), with one member of the local behavioral insights’ unit serving as a coach or mentor for each group. Students learn to engage with stakeholders, develop a behavioral map of the underlying challenge, design an intervention and an appropriate impact evaluation method, implement the intervention, collect data and analyze findings of the intervention. The timeline and milestones for designing, implementing, and evaluating the field experiments are developed according to B4Development and Nudge Lebanon’s IDIAS methodology (See Figure 1 for more details). At the end of the course, students compile their results into a final research paper and present to their peers and faculty members.

FIGURE 1  
IDIAS methodology



## Lessons Learned

There are many lessons that can be learned from these courses. This article outlines some of the most important issues universities should keep in mind when replicating similar courses.

<sup>3</sup> For more information on SHAPE DIFFERENCE, see <http://www.b4development.org/our-framework/>

<sup>4</sup> For more information on MINDSPACE, see <https://www.instituteforgovernment.org.uk/sites/default/files/publications/MINDSPACE.pdf>

<sup>5</sup> EAST stands for Easy, Attractive, Social and Timely; for more information, see <https://www.bi.team/publications/east-four-simple-ways-to-apply-behavioural-insights/>

### **Seek collaboration across sectors**

A design-based course that requires students to develop a field experiment over the course of a semester requires time and resources that necessitates collaboration. By partnering with practitioners, universities can offer students experiential learning in a real-world context. According to several motivational frameworks that explain benefits of collaboration between university and industry or community, universities are achieving growth in knowledge by being exposed to up-to-date insights and case-studies, getting opportunity to test theories in practice and facilitate pedagogical excellence, exposing students and faculty to practical problems and receiving support for conducting applied research, and working together in publicizing the papers (Ankrah & AL-Tabbaa, 2015; Gazley, Bennett & Littlepage, 2013). In general, universities seek cross-sectorial collaborations to adapt to changes in the environment such as transition to knowledge-based economy (Ankrah & AL-Tabbaa, 2015). Both parties, academics, and practitioners, are gaining more legitimacy by collaborating with each other; universities in demonstrating greater social accountability, and entrepreneurship; and practitioners in enhancing their reputation and visibility. Another benefit to practitioners is the access to university resources as well as to high quality internships or new hires.

With this in mind, each course in this collaboration was a joint venture between a university and a behavioral insights unit in the respective country. University faculty instructed students on theory during lectures, and members from the respective nudge units led lab sessions, during which they served as coaches/mentors to guide students in designing and testing nudges in field experiments. More details can be found in Table 3.

The region's first behavioral economics course in 2017 was a result of a partnership between HBKU's College of Law and Public Policy and the Supreme Committee for Delivery and Legacy (SC)—the government body responsible for overseeing the 2022 FIFA World Cup™ in Qatar. The SC's B4D created the course *Behavioral law and Regulation* for final year law school graduate students. In Lebanon, AUB followed suit in Spring 2018, and again in Spring 2019 and Spring 2020 with the course *Behavioral Economics and Public Policy*. The economics department collaborated with Nudge Lebanon to develop a course for graduate and undergraduate students from various disciplines (e.g. economics, psychology and public policy) who explored how to leverage nudge theory for evidence-based policymaking.

The third university in the region to introduce the course was AUK in Fall 2018. The College of Business and Economics (CBE) at AUK partnered with the newly established nudge unit, the Kuwait Policy Appraisal Lab (KPAL) to offer the course *Behavioral Public Policy for Sustainability and the Environment*. The course delivery was the result of a collaboration between AUK, KPAL, B4D, Nudge Lebanon, and a joint team from the United Nations Development Program (UNDP) and the Kuwait Public Policy Center (KPPC).

TABLE 3

Details on experiential behavioral economics courses in three Middle East universities

University	Year	Program	Course name	Program level	Number of students	Collaboration partners	Number of experiments
Hamad Bin Khalifa University (HBKU, Qatar)	2017	College of Law and Public Policy	Behavioral Law and Regulation	Graduate	14	B4Development	4
	2018				10	Nudge Lebanon	3
American University of Beirut (AUB, Lebanon)	2019	Faculty of Economics	Behavioral Economics and Public Policy	Undergraduate / Graduate	19	Nudge Lebanon	5
	2020				25	Nudge Lebanon	4
American University of Kuwait (AUK, Kuwait)	2018	The College of Business and Economics	Behavioral Public Policy for Sustainability and the Environment	Undergraduate	9	Kuwait Policy Appraisal Lab, B4Development, Nudge Lebanon, UNDP, Kuwait Public Policy Center	2

### **Curate ideas for experiments with stakeholders prior to start of semester**

Proper planning and the commitment of partners play an important role in a successful academia-practice collaboration, but what is even more important and usually underestimated in academia-practice collaborations, is risk (Rybnicek & Königgruber, 2019). Allowing students to start their experiments from scratch presents considerable risk. Not only is there limited time—semesters are typically 15 weeks whereas real-world experiments can take months if not years—but also research projects that involve human subjects often require calibration when circumstances arise. To alleviate this risk, instructors can curate experiments before the start of the semester. This gives students the potential to design medium-scaled experiments rather than micro- or small-scaled experiments. After a brief overview, Table 4 provides the full list of all experiments conducted throughout the course of delivering five behavioral economics courses:

- At HBKU in Qatar, instructors guided fourteen students to experiment in areas relevant to current issues facing the country, such as hosting the 2022 FIFA World Cup™ and fulfilling the aims of the Qatar National Vision 2030. These areas covered environment, nutrition and health, and compliance.
- As part of the first course provided at AUB (Spring 2018), students conducted three field experiments from the public health and environment policy areas.
- Demand for the course grew and by the next spring in 2019, the number of students registered for the class doubled. Five field experiments addressed the challenges from the areas of environment, nutrition, compliance, and public health.
- The third cohort of students at AUB (Spring of 2020) designed four experiments that would help with the economic recovery in Lebanon (supporting local production, graduate employment), as well as promote sustainability and reduce traffic violations. However, due to the rise of COVID-19 pandemic, and the state

of national lockdown declared by the government, students were able to implement only one intervention in the field.

- The experiments at AUK were related to sustainability challenges laid out in the Kuwait National Development Plan connected to the New Kuwait Vision 2035, focusing on issues around energy and environment.

TABLE 4  
List of experiments conducted in three Middle East universities

Course	Experiments	Policy Area	N	Intervention Effect
HBKU, 2017	Reducing the demand for plastic cutlery with delivery orders by a local restaurant using active choice	Environment	174	Significant
	Increasing the sale of healthy food items at a university cafeteria using salience and emotion	Nutrition	10	Mixed
	Increasing demand for taking away leftover food in a local restaurant using defaults and active choice	Environment	1208	Significant
	Increasing interest in recycling using salient signs at a local campus	Environment	1570	Significant
AUB, 2018	Decreasing noncompliance with footwear instructions in a mosque using salience, social norms, and hassle	Compliance	69	Significant
	Increasing donations to the Children's Cancer Center using reminders and emotional appeal	Public health	463	Insignificant
	Increasing the regular use of eco-friendly shopping bags at a large chain supermarket using SMS reminders	Environment	1400	Mixed
	Increasing the demand for leftover food at a restaurant using a change in defaults	Environment	256	Insignificant
AUB, 2019	Increasing the uptake of composting at university campus by combining several nudges	Environment	54	Significant
	Increasing salad consumption using dynamic social norms at a local restaurant	Nutrition	103	Significant
	Increasing brown bread consumption in a university cafeteria using a change in defaults	Nutrition	405	Significant
	Increasing vegetarian food consumption using static and dynamic social norms at local restaurant	Nutrition	321	Insignificant
AUB, 2020	Increasing blood donor registration at a retail outlet store using dynamic social norms and reciprocity	Public health	13	Insignificant
	Increasing the demand for local products on a food delivery application using salience	Public finance management	3978	Insignificant
	Increasing demand for jobs through university career services	Employment	Suspended due to COVID-19 lockdown	
	Increasing traffic compliance on selected roads using salience	Compliance		
AUK, 2018	Increasing eco bag purchases at market by combining several nudges	Environment		
	Decreasing littering in local cinema theatres using salient and timely reminders	Environment	72	Significant
	Improving recycling at university campus using salience and priming	Environment	192	Significant

Members from behavioral insights units involved in the HBKU, AUK and AUB courses had already identified and worked with interested stakeholders to pinpoint the challenges that students could address in experiments prior to the semester. Before the semester, organizers can identify areas of experimental interest (e.g. sustainability, health). Students can retain creative control over the experimental design and have ample time for implementation and evaluation.

### Leave room for innovation

Though preliminary preparation for the course is vital to the planning process, it is important that professors and nudge unit coaches remain open to innovative experiments and allow for exceptions to a rule. After all, quest for innovative ideas and solutions is a critical component of collaboration between academia and practice (Guimon, 2013). At HBKU in Qatar, one group managed to get approval for an original intervention that looked at increasing footwear compliance at mosques. B4D eventually helped scale up the experiment. In the case of AUK, the challenges that students worked on addressing stemmed out of a class brainstorming exercise that sought to create a list of challenges in the area of sustainability that could be addressed using behavioral insights.

In carefully considered exceptions, students should be permitted to design experiments from scratch. Students



might conceive of an intervention that addresses a problem of interest to nudge units, but practitioners had previously approached differently (if at all). Evaluation of feasibility—the potential of an experiment going full circle within a semester—rests essentially within the nudge unit.

Key criteria for approving students' own ideas include:

- Buy-in from the stakeholder where experimentation is to take place
- Access to their historical and future data for the duration of the experiment
- Relevant behavioral economics research question
- Relevant priority challenge with scalable public policy implications
- Ability to get timely IRB approval, which is the focus of the next section

### **Establish early and close coordination with the IRB committee**

There is a list of various ethical considerations in designing, implementing, and reporting experiments from behavioral economics, that stems from the involvement of human beings as research subjects. To protect the rights and well-being of human subjects, students should be made aware of institutional review board (IRB) approvals. IRB is an administrative committee responsible for approving research that includes human subjects. It reviews proposed research projects to ensure the respect and protection of the welfare, rights and privacy of participants. An IRB can approve, reject, monitor and require modifications to projects.

There are three levels of review. Exempted reviews are conducted by at least one IRB member. Qualifying experiments must present only minimal risk to subjects and fall under one or more of six categories, including benign behavioral interventions. Experiments that qualify for an expedited review must incorporate appropriate protections for subjects and/or their responses so that the risks related to privacy and breach of confidentiality are no greater than minimal. These projects must fall under one or more of seven categories. Full board reviews demand the most time and IRB approval can take months. Behavioral experiments that target sensitive topics (e.g. religion and mental health) or high-risk subjects (e.g. marginalized groups, children and cognitively impaired) necessitate extra protections, and are likely to require a full board review (University of Southern California, n.d.).<sup>6</sup>

With only a semester to design, conduct and evaluate an experiment, it is advisable that students avoid interventions with target populations that would require full board reviews. Coaches should help students choose experiments in which the research activities satisfy the regulations for an exempt or expedited review. Therefore, experimental design should begin early in the semester, so that students, coaches and professors can fine-tune the scope of the experiment and ensure it meets IRB regulations. Likewise, communicating with the affiliated IRB members during the course planning process and throughout the semester is desirable. This

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<sup>6</sup> A full listing of exempt, expedited and full board categories can be found here: <https://oprs.usc.edu/irb-review/types-of-irb-review/>

way, committee members will be aware of and plan for important dates like course deadlines, and when to expect project proposals. Students can send IRB members summaries of their intervention ideas early on in order to get feedback on the level of review the experimental design would likely require.

### **Make the design of the experiment the real objective of the course**

Behavioral economics is a relatively new field and experiential behavioral economics courses are even newer. Learning from mistakes is an important mindset to maintain so instructors can continue to provide a high-quality experience for students as these courses evolve.

When HBKU and B4Development in Qatar planned the first design-based course, they underestimated the time required to conduct experiments. Instructors spent the first third of the semester only teaching theories of behavioral economics and behavioral public policy. Members of B4Development delayed the start of coaching sessions until the sixth and seventh week. Professors and students soon realized they had to race the clock for the rest of the semester to complete field experiments. Similarly, the first generation of the course at AUB faced similar challenges. However, major improvements were introduced to the course when replicated a year later to allow more time to complete field experiments. Instructors divided each lecture into two parts—the first half dedicated to teaching theory and the second half set aside for planning experiments during the lab session. This redesign also meant students could learn the theories and simultaneously start thinking about experiments from day one.

The takeaways from planning and completing an entire experimentation process in a semester is immense. It is important to emphasize to students therefore, that they will be graded on the amount of effort put into projects instead of the ultimate success of experiments. Even small effect sizes can be a learning opportunity for students of behavioral economics. This point must be stressed upfront, namely, the need to celebrate experiments with null results, as much as ones with positive ones.

### **Conclusion**

The field of behavioral economics has become central to the practice of public policy and to doing business. It is imperative that universities expose students to it moving forward, more so through experiential learning. This process is effective because it requires students to confront their beliefs and ideas about rational decision-making, examine and test them, and integrate the “new, more refined” concepts “into the person’s belief systems” (Kolb, 1984, p 28). Just as behavioral economists tend to study decisions by focusing on the mental processes behind them rather than their outcomes, experiential learning posits that learning too is “best conceived as a process, not in terms of outcomes”. (Kolb & Kolb, 2009, p 43). Students, wherever their career will take them, can gain a new skillset through engaging in a process that enhances their understanding of behavioral economics, namely in designing and implementing real life policy experiments to test what works.

But to do this, flexibility in delivery is key. While still in the realm of behavioral economics, the focus could

vary, in large part depending on the faculty where this is primarily offered, e.g., economics, public policy or psychology. In addition, when replicating the course, universities should evaluate what will and will not work in their unique context and adapt accordingly. Insights from universities that have already instituted the course and feedback from students are essential.

Beyond universities, B4D and Nudge Lebanon are piloting similar courses at high schools in the Middle East to be delivered for senior students, another step in scaling up the teaching of behavioral economics for wider impact and greater social good.

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TABLE 1. Timeline & Milestones of the Course: Description of the 14-week timeline and milestones for designing, implementing, and evaluating the field experiments in accordance with the IDIAS methodology

TABLE 2. Summary of Anchoring Effect Exercises in two universities

FIGURE 1 IDIAS methodology

TABLE 3 Details on experiential behavioral economics courses in three Middle East universities

TABLE 4 List of experiments conducted in three Middle East universities

TABLE 5 Lessons learned and essential questions to consider when designing experiential behavioral economics course