

#### THE UNIVERSITY OF CHICAGO HARRIS SCHOOL OF PUBLIC POLICY

## PPHA 35240: EDUCATION IN DEVELOPING CONTEXTS 9:00 am - 11:50 am

## PBPL 28350/ECON 16710/EDSO 28350: EDUCATION AND ECONOMIC DEVELOPMENT 1:30 pm - 4:30 pm

WINTER 2022, MONDAYS Keller Center 2112

## **DRAFT SYLLABUS**

Instructor:	Professor Anjali Adukia Keller 2093 adukia@uchicago.edu
ТА (РРНА 35240):	Maria Adelaida Martinez Cabrera mariaadelaidamc@uchicago.edu
TA (PBPL 28350):	Emileigh Harrison harrisone@uchicago.edu
Office hours:	To meet with Prof. Adukia, sign up online: <u>http://tinyurl.com/npb42qe</u>
	To meet with your TA, reach out via email.
	If you sign up and later find that you are no longer able to make that time or no longer need the appointment, please

This course covers policy issues related to education in developing contexts. We will analyze education policies and reforms, develop skills to be a critical consumer of relevant research on each topic, and examine implications of the findings to policy and practice. Topics include discrimination and inclusion in education, understanding factors that influence educational decisions, provision of basic needs in schools, teacher pay and incentives, education in emergency settings, and school choice.

be sure to remove your name.

**Prerequisites:** Tools of microeconomic theory and econometric analysis will be used. Students lacking these prerequisites should seek permission from the instructor.

#### **Readings and guest speakers**

*Readings*. Many of the issues discussed in the course would benefit from the perspective of multiple disciplines. However, much of the emerging causal evidence on education in developing countries comes from the field of development economics, and therefore, the reading list of the course is composed mainly of studies that use economic tools to analyze educational issues. These articles can be found through the University of Chicago library system or through the course reserves link on Canvas. Useful resources in

understanding some of the methods used in the readings include: *Mostly Harmless Econometrics* by Angrist and Pischke or *Methods Matter: Improving Causal Inference in Educational and Social Science Research* by Murnane and Willett. Students may also find useful: *Running Randomized Evaluations* by Glennerster and Takavarasha and *Failing in the Field* by Karlan and Appel. These are on reserve at Regenstein Library.

*Guest speakers.* Guest speakers will often join us at the beginning of each class, typically via videoconference. They will often request that students prepare materials in addition to the readings listed for the course, which will also be announced ahead of time. The schedule may change as we go, and the instructor will announce adjustments accordingly. Speakers spend their valuable time to visit the class whether in person or virtually, so it is very important that students remain engaged during their visits.

## Requirements, assignments, and grading

Grades will be based on regular attendance and active class participation including submission of weekly discussion questions (30%), leading a class presentation and discussion (30%), and a final project consisting of two project proposals, a presentation, and a final paper (40%).

## Deadlines are as follows:

- □ Student survey (online at Canvas): Please fill out by January 4 at 12 pm.
- Discussion questions: Due by noon on Canvas the day before class (4 classes)
- □ In-class presentation: Meet with instructor one week before class, give presentation in class, and submit final slides and short report (contributions and references) by 12 pm the day after class.
- □ Final project: 2 project proposals due by noon January 18, first draft of proposal by February 10, peer review by February 17, oral presentation on February 28, written paper due March 4.

## Class participation, including attendance and discussion questions (30%)

Active engagement and reflection are essential requirements for this course. Students are expected to contribute substantively to class discussions. The quality of participation is just as important as the quantity. Class participation grades will be based on questions and comments students pose in class and on the weekly discussion questions. Disengagement from the class will count against the participation component of your grade. Students will be cold-called in class at times. Students must also be on time for class, especially when we have a guest speaker; otherwise, it may count against one's grade.

*Discussion Questions.* For a minimum of four of the weeks in the term, students are expected to submit three discussion questions for the week's readings by 12:00 pm on the day before the class meets (Sunday) on Canvas. Two of the questions should be about the readings themselves, and one of the questions should be a question that the readings left you with and an idea of a way to study it. If a student submits discussion questions for more than four of the class sessions, only the highest four grades will be counted. Students should not duplicate questions asked by other students.

*Attendance*. Students who miss one class should email the instructor before missing the class and will be responsible for writing a two-page paper in response to two of the assigned readings for the week. A report should address the following questions:

- What are the questions being addressed by this study? Why do these questions matter?
- What are the answers offered by the study?
- What evidence is brought to bear?
- In your view, does the evidence compellingly support the conclusion of the study? Why or why not?
- Can you propose a better way to study or address the same question?

If students miss more than one class, they must see the instructor. These reports (no longer than 2 pages) should be posted to the Canvas website by 11:59 pm Tuesday, the day after class. Students can not miss the last class on February 28.

## Weekly in-class presentations (30%)

Groups will be assigned based on student preference indicated in the student survey. If a given topic has more interest than available slots, we will assign students randomly.

*Presentation/discussion facilitation.* In addition to general class participation, each student will make an in-class presentation as part of a small group. Your group's objective is to research an historical aspect of the topic of the day, make an informative presentation to teach your classmates about this aspect, and foster discussion on the topic. Presentations are limited to 20 minutes total. After the presentation, the group will have *ten minutes* to lead a discussion directly related to the cases.

Some requirements to keep in mind:

- Meeting with the instructor: At least *one week* before the presentation, a majority of the group should meet with the instructor to discuss their specific lecture and possible presentation topics. Afterwards, the group should email Prof. Adukia to confirm the selected historical case and general plan for the presentation.
- Complete the research on the historical aspect. Prioritize your main points and produce a polished draft of the presentation. The basic organization of most presentations should be: (a) give context, (b) describe the historical aspect, (c) connect it to the academic literature and how it is relevant to understanding the topic of the day, (d) discuss the effects and implications in the modern-day world. Students should be sure to present the material in a clear, thought-provoking manner.
- After the presentation, submit a final version of the slides and a bibliography that includes complete citations of the sources used using APA format and other supporting materials (if relevant). Each group member should submit a brief description of how each group member contributed. These items are due via Canvas by noon the day after the presentation.

This part of the grade is based on the following criteria:

- Ability to develop a presentation related to the issue of the day and visually and clearly convey the material in an informative manner (e.g., using slides).
- Delivery of the presentation in class with the goals of teaching your classmates about the cases and highlighting key facts and issues
- Ability to facilitate a discussion of thoughtful questions and to foster quality class participation
- The quality of general class participation will also be taken into account and may result in altering your presentation grade either up or down

Please name the files using the following naming convention: "lastname1\_lastname2 \_lastname3\_topic\_w22." For example: for the group presentation slides on the first week of classes with group members Maria Adelaida Martinez Cabrera and Emileigh Harrison, you would name the file: "Cabrera\_ Harrison\_Why\_Schools\_W22."

## Final project (40%)

For the final project, students will design, present, and write an original evidence-based (1) business idea, (2) policy proposal, or (3) research proposal designed to improve educational outcomes. The specific topic is open-ended, allowing students to explore a question that is most suited to their interests, skills, and career interests. This will be done in self-selected groups of three or more people.

The final project will be comprised of a few components:

□ 2 one-page project proposals (due January 18, 12pm)

- First draft of your group's proposal (due February 10, 12pm)
- Deer review first draft (due February 17, 12pm)
- □ A presentation to be delivered during the last class session (due February 28, in-class)
- □ A jointly-authored, 12-15-page document (not including references) and an individual contribution statement (due March 4, 12pm)

*Topic Proposals.* The 2 one-page project proposals should include:

- Who is the audience for your proposal? Who would be the ideal recipient/reader of your project?
- Is it a policy proposal, business proposal, or research proposal?
- What's the bigger issue you want to address? What's the specific question/part of the issue you wish to address?
- For which content, for which population?
- How do you propose to address it?
- Why do you think this might be an effective strategy/the best way to approach the issue (cite some evidence that your proposal has promise)?

*First Draft.* You will complete a comprehensive first draft of your proposal. Your classmates will need this for peer review, so be sure to complete it on time.

*Peer review.* Each group member will be assigned to individually peer review another group's proposal. These should provide comprehensive feedback which both provides bigger picture perspectives (what is the contribution of this proposal, what are the strengths and areas for improvement, are there any gaps in the logic or proposal, helping the group see the forest from the trees, checking that enough information is included such that all parts of the proposal make sense and are easily understood such as pointing out where things need to be clearer or more concrete, where they need to link point A to point B, whether they need to include a better rationale for their idea, etc.) in addition to more detailed feedback about specific ways they can improve the proposal and copyediting,

*Final Class Presentation.* Students will present their proposals to their classmates in the final class session. Students should meet with Prof. Adukia and the TA at least one week prior to the presentation itself. The presentation should be directed at a specific audience (e.g. a minister of education, a foundation funding youth programs, a venture capitalist supporting non-profit organizations, a research organizations, etc.). All assertions on slides should be cited using APA format. Students will also provide feedback to their peers on their presentations during the class period. The final set of slides and a bibliography in APA format should be posted to Canvas under the relevant Discussion thread by the start of class that Monday.

*Final Proposal.* One group member should submit the final proposal to Canvas. Each group member should also individually submit a note about the contributions of each of the group members (including themselves) for each component of the final project.

Students should consider the following when crafting their proposals and presentations:

- Do you think that this proposal could help in solving the larger issue? Is this an interesting and promising idea?
- What is the quality of the proposal and analysis?
- What role does evidence play in supporting the different components?
- How well is the information communicated?
- If you were the target audience member (minister of education, grant officer at a foundation, venture capitalist, etc.), would you support this proposal? Why or why not? What more would you need or want to know?

Assignments should be typed and submitted using a font size of 11 point Times New Roman (or equivalent) with 1-inch margins and 1<sup>1</sup>/<sub>2</sub>-inch spacing. APA format should be used in citations.

Papers will not be accepted past the deadline. Students should work on their projects continually throughout the term and allow for the possibility of unforeseen circumstances. If you need accommodations, please see the instructors before the start of the quarter.

#### Accommodations

If you require accommodations for this course, please inform Professor Adukia and your TA at the beginning of the quarter. Please provide a copy of the Accommodations Letter (provided to you by Student Disability Services) so we can discuss how your accommodations may be implemented in the course.

## Plagiarism

Please read The University of Chicago policy on plagiarism, presented in the Student Manual. If you have any questions about how to properly attribute sources, please contact the teaching staff.

**Course readings and schedule** (*subject to change – please check Canvas for updates*)

## WHY EDUCATION? (JANUARY 3)

\*This syllabus (read it before the first class session)

- \*Duflo, E. (2001). Schooling and labor market consequences of school construction in Indonesia: evidence from an unusual policy experiment. *American Economic Review*, *91*(4), 795-813.
- Psacharopoulos, G. (1984). The contribution of education to economic growth: international comparisons. Washington, DC: World Bank.
- Becker, G. S. (1962). Investment in human capital: A theoretical analysis. *The Journal of Political Economy*, 70(5), 9-49.
- Card, D. (1999). The causal effect of education on earnings. In O. Ashenfelter and D. Card, eds., *Handbook of Labor Economics*, *3A*. Elsevier.
- Heckman, J. J., Humphries, J. E., & Veramendi, G. (2018). The nonmarket benefits of education and ability. *Journal of human capital*, *12*(2), 282-304.

## **DISCRIMINATION AND INCLUSION IN EDUCATION (JANUARY 10)**

Guest Speaker: Susan Durston, Education Advisor, Former UNICEF Global Chief of Education, Trustee of Child-to-Child

- \*Adukia, A., Eble, A., Harrison, E., Runesha, H.B., & Szasz, T. (2021). What we teach about race and gender: Representation in images and text of children's books.
- \*Hanna, R. & Linden, L. (2012). Discrimination in grading. *American Economic Journal: Economic Policy*, *4*(4): 146-68.
- \*Rao, G. (2013). Familiarity does not breed contempt: diversity, discrimination, and generosity in Delhi schools. Unpublished manuscript. <u>http://scholar.harvard.edu/rao/publications/familiarity-does-not-breed-contempt-diversity-discrimination-and-generosity-delhi</u>

- Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of personality and social psychology*, 69(5), 797.
- Hoff, K. & Pandey, P. (2004). An experimental investigation of Indian caste. <u>http://sticerd.lse.ac.uk/dps/bpde2004/hoff.pdf</u>
- Behrman, J. (1997). Intrahousehold distribution and the family. In: Mark R. Rosenzweig and Oded Stark, editors, *Handbook of Population and Family Economics*, Elsevier, 1(A)125-187.
- Margo, R. (1990). Race and schooling in the South, 1880-1950: an economic history. University of Chicago Press, chapter 2.
- Bertrand, M., Hanna, R., & Mullainathan, S. (2010). Affirmative action in education: evidence from engineering college admissions in India. *Journal of Public Economics*. 94, 16-29.

#### MARTIN LUTHER KING, JR. DAY, NO CLASS (JANUARY 17)

# DEMAND-SIDE CONSIDERATIONS: ROLE OF BASIC NEEDS, INCENTIVES, REDUCING COSTS OF SCHOOLING (JANUARY 24)

*Guest Speaker: Anjali Desai, Community Worker and Facilitator, Educator, Patangyu, Manav Sadhna, Gramshree, Seva Cafe, Earn 'n' Learn, India Guide Publications* 

- \*Adukia, A. (2017). Sanitation and education. *American Economic Journal: Applied Economics*. <u>http://harris.uchicago.edu/sites/default/files/Adukia\_Sanitation\_and\_Education.pdf</u>
- \*Miguel, E. & Kremer, M. (2004). Worms: identifying impacts on education and health in the presence of treatment externalities. *Econometrica*. 72(1), 159-217.
- Evans, David K., and Anna Popova. (2016). What really works to improve learning in developing countries? An analysis of divergent findings in systematic reviews. World Bank Research Observer. 31(2): 242-270. Database of education studies with learning, attendance, enrollment outcomes: <u>https://sites.google.com/site/davidkevans/database-of-education-studies</u>
- Kazianga, H., Levy, D., Linden, L. L., & Sloan, M. (2013). The effects of 'girl-friendly' schools: evidence from the BRIGHT school construction program in Burkina Faso. *American Economic Journal: Applied Economics*, 5(3), 41-62.
- Bleakley, H. (2007). Disease and development: evidence from hookworm eradication in the American South. *The Quarterly Journal of Economics*. *122*(1), 73-117.
- Glewwe, P. & Kremer, M. (2006). Schools, teachers, and education outcomes in developing countries. *Handbook of the Economics of Education*, 2, 945-1017.
- Evans, D., Kremer, M., & Ngatia, M. (2009). The impact of distributing school uniforms on children's education in Kenya. Unpublished manuscript. Abdul Latif Jameel Poverty Action Lab. <u>http://www.povertyactionlab.org/evaluation/impact-distributing-school-uniforms-childrens-education-kenya</u>
- Kremer, M., Miguel, E. & Thornton, R. (2009). Incentives to learn. *The Review of Economics and Statistics*. *91*(3): 437-456

- Rawlings, L. & Rubio, G. (2005). Evaluating the impact of conditional cash transfer programs. *World Bank Research Observer*, 20(1): 30-55.
- Schultz, P. (2004). School subsidies for the poor: evaluating the Mexican Progresa poverty program. *Journal of Development Economics*. 74(1): 199-250.
- Vermeersch, C. & Kremer, M. (2004). School meals, educational achievement and school competition: evidence from a randomized evaluation. *World Bank Policy Research Working Paper*. No. 3523.
- Banerjee, A. Cole, S., Duflo, E. & Linden, L. (2007). Remedying education: evidence from two randomized experiments in India. *Quarterly Journal of Economics*, 122(3): 1235-1264.
- Banerjee, A., Banerji, R., Berry, J., Duflo, E., Kannan, H., Mukherji, S., Shotland, M., & Walton, M. (2016). Mainstreaming an effective intervention: Evidence from randomized evaluations of "Teaching at the Right Level" in India (No. w22746). National Bureau of Economic Research.
- Glewwe, P., Kremer, M., & Moulin, S. (2009). Many children left behind? Textbooks and test scores in Kenya. *American Economic Journal: Applied Economics*, 1(1), 112-135.
- Glewwe, P., Kremer, M., Moulin, S., & Zitzewitz, E. (2004). Retrospective vs. prospective analyses of school inputs: the case of flip charts in Kenya. *J. of Development Economics*, 74(1), 251-268.
- Malamud, O., & Pop-Eleches, C. (2011). Home Computer Use and the Development of Human Capital. *Quarterly Journal of Economics*, 126(2), 987-1027.
- Das, J., Dercon, S., Habyarimana, J., Krishnan, P., Muralidharan, K., & Sundararaman, V. (2013). School inputs, household substitution, and test scores. *American Economic Journal: Applied Economics*, 5(2), 29-57.

#### MARKET REFORMS: SCHOOL CHOICE (JANUARY 31)

Guest speakers: Harshil Sahai, UChicago PhD candidate, and Elizabeth Bartholet, Harvard Law School Morris Wasserstein Professor of Law, Emeritus

- \*Angrist, J., Bettinger, E., Bloom, E., King, E., & Kremer, M. (2002). Vouchers for private schooling in Colombia: evidence from a randomized natural experiment. *American Economic Review*, 92(5): 1535-58.
- \*Muralidharan, K. & Sundararaman, V. (2015). The aggregate effect of school choice: evidence from a two-stage experiment in India. *Quarterly Journal of Economics*, 130(3): 1011-66.
- \*Neilson, Chris. "Targeted Vouchers, Competition Among Schools and the Academic Achievement of Poor Students." Working Paper. <u>christopherneilson.github.io/work/documents/Neilson\_JMP/Neilson\_SEPVouchers2021.pdf</u>
- \*Bartholet, Elizabeth. (2020). Homeschooling: Parent Rights Absolutism vs. Child Rights to Education & Protection, 62 Arizona Law Review 1.
- Allende, Claudia. "Competition Under Social Interactions and the Design of Education Policies." Working Paper. <u>scholar.princeton.edu/sites/default/files/callendesc/files/jmp\_ca\_vf.pdf</u>

- Campos, Chris and Caitlin Kearns. "The Impacts of Neighborhood School Choice: Evidence from Los Angeles Zones of Choice" Working Paper. <u>dropbox.com/s/hyzj2s3nwe9ujsj/jmp\_zoc.pdf?dl=0</u>
- Angrist, J., Bettinger, E., & Kremer, M. (2006). Long-term educational consequences of secondary school vouchers: evidence from administrative records in Colombia. *American Economic Review*, 96(3): 847–62.
- Hsieh, C. & Urquiola, M. (2006). The effects of generalized school choice on achievement and stratification: Evidence from Chile's school voucher program. *Journal of Public Economics*, 90: 1477-1503.
- Cullen, J., Jacob, B. and Levitt, S. (2006). The effect of school choice on student outcomes: evidence from randomized lotteries. *Econometrica*. 74(5): 1191-1230.
- Cullen, J., Jacob, B. and Levitt, S. (2005). The impact of school choice on student outcomes: an analysis of the Chicago Public Schools. *Journal of Public Economics*. 89(5-6): 729-760.
- Houston Jr, R. G., & Toma, E. F. (2003). Home schooling: An alternative school choice. *Southern Economic Journal*, 920-935.

#### SUPPLY-SIDE CONSIDERATIONS: TEACHERS (FEBRUARY 7)

Guest speaker: Timothy F.C. Knowles, President of Carnegie Foundation for the Advancement of Teaching, former Chairman of the University of Chicago Urban Education Institute, former Deputy Superintendent for Teaching and Learning in Boston Public Schools, and founding director of Teach for America in New York City

- \*Muralidharan, K. & Sundararaman, V. (2011). Teacher performance pay: experimental evidence from India. *Journal of Political Economy*, *119*(1), 39-77.
- \*Duflo, E., Hanna, R., & Ryan, S. (2012). Incentives work: getting teachers to come to school. *The American Economic Review*, *102*(4), 1241-1278.
- Glewwe, P., Ilias, N., & Kremer, M. (2010). Teacher incentives. *American Economic Journal: Applied Economics*, 2(3), 205-227
- Chaudhury, N., Hammer, J., Kremer, M., Muralidharan, K., & Rogers, F. H. (2006). Missing in action: teacher and health worker absence in developing countries. *Journal of Economic Perspectives*, 20(1): 91-116.
- Duflo, E., Dupas, P., & Kremer, M. (2012). School governance, teacher incentives, and pupil-teacher ratios: experimental evidence from Kenyan primary schools. National Bureau of Economic Research. Working Paper No. 17939.

#### EDUCATION IN EMERGENCY SETTINGS: CRISIS AND CONFLICT (FEBRUARY 14)

Guest speakers: David Evans, Senior Fellow at the Center for Global Development, and Nompumelelo (Mpumi) Mohohlwane, Deputy Director, Research Coordination, Monitoring and Evaluation Directorate, Department of Basic Education, South Africa

\*Crawfurd, L., Evans, D., Hares, S., & Sandefur, J. (Sept. 2021). Teaching and Testing by Phone in a Pandemic. https://www.cgdev.org/publication/teaching-and-testing-phone-pandemic

- \*Shepherd, D. & Mohohlwane, N. (2021). The impact of COVID-19 in education more than a year of disruption. NIDS-CRAM Wave 5 Working Paper. <u>https://cramsurvey.org/wp-content/uploads/2021/07/11.-Shepherd-D-\_-Mohohlwane-N.-2021.-Changes-in-education-A-reflection-on-COVID-19-effects-over-a-year.pdf</u>
- \*Blattman, C. & Annan, J. (2010). The consequences of child soldiering. *Review of Economics and Statistics*, 92(4), 882-898.
- Asanov, I., Flores, F., McKenzie, D., Mensmann, M., & Schulte, M. (Feb. 2021). Remote-learning, timeuse, and mental health of Ecuadorian high-school students during the COVID-19 quarantine. *World Development*, *138*, 105225.
- Cas, A., Frankenberg, E., Suriastini, W., & Thomas, D. (2013). The impact of parental death on child well-being: evidence from the Indian Ocean Tsunami, NBER Working Papers No. 19357, http://EconPapers.repec.org/RePEc:nbr:nberwo:19357
- Student achievement growth during the COVID-19 pandemic. <u>https://gpl.gsu.edu/publications/student-achievement-growth-during-the-covid-19-pandemic/</u>
- Learning losses due to COVID19 could add up to \$10 trillion. https://blogs.worldbank.org/education/learning-losses-due-covid19-could-add-10-trillion
- Gladstone, R. (2014, December 8). UNICEF calls 2014 one of worst years on record for world's children. *New York Times*. http://www.nytimes.com/2014/12/09/world/unicef-calls-2014-one-of-worstyears-on-record-for-worlds-children.html
- Akresh, R. & de Walque, D. (2008). Armed conflict and schooling: evidence from the 1994 Rwandan genocide. *IZA Discussion Paper* No. 3516
- Frankenberg, E., Sikoki, B., Sumantri, C., Suriastini, W., & Thomas, D. (2013). Education, vulnerability, and resilience after a natural disaster. *Ecology and Society*, *18*(2): 16.
- Dryden-Peterson, S. & Mundy, K. E. (2011). Educating children in zones of conflict: an overview and introduction. In *Educating children in conflict zones: Research, policy, and practice for systemic change: a tribute to Jackie Kirk*. New York: Teachers College Press.
- Imberman, S. A., Kugler, A. D., & Sacerdote, B. I. (2012). Katrina's children: evidence on the structure of peer effects from Hurricane Evacuees. *American Economic Review*, *102*(5), 2048-2082.
- Burde, D., Kapit-Spitalny, A., Wahl, R., & Guven, O. (2011). Education and conflict mitigation: What the aid workers say. Washington, DC: US Agency for International Development, Education Quality Improvement Program 1.

#### EDUCATION RESPONSES TO LABOR DEMAND SHOCKS (FEBRUARY 21)

- \*Adukia, A., Asher, S., & Novosad, P. (2020). Educational investment responses to economic opportunity: Evidence from Indian road construction. *American Economic Journal: Applied Economics*.
- \*Jensen, R. (2012). Do labor market opportunities affect young women's work and family decisions? Experimental evidence from India. *The Quarterly Journal of Economics*. 127 (2), 753-792.

- \*Atkin, David. (2016). Endogenous skill acquisition and export manufacturing in Mexico. *American Economic Review*. 106(8), 2046-2085.
- Adukia, A. (forthcoming). Spillover impacts on education from employment guarantees. *Education Finance and Policy*.
- Shah, Manisha & Steinberg, B. (2016). Drought of opportunities: Contemporaneous and long term impacts of rainfall shocks on human capital. *Journal of Political Economy*.
- Shastry, Gauri Kartini. (2012). Human capital response to globalization: Education and information technology in India. *Journal of Human Resources*. 47(2), 287-330.

STUDENT PRESENTATIONS OF PROJECTS (FEBRUARY 28)