

CHAPTER 13 *

Image of Research: Celebrating and Sharing Undergraduate Work

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Introduction

In 2013 and 2015 respectively, the University of Illinois at Urbana-Champaign (Illinois) and the University of Kansas (KU) implemented an Image of Research competition, a library-led initiative designed to showcase original research of undergraduate students. The Image of Research competition is a multidisciplinary competition celebrating the diversity and breadth of undergraduate student research by inviting students to submit entries consisting of an image and brief text that articulates how the image relates to their research.¹ The work of the students is shared widely and archived in the institutional repository, providing students with an easy-entry experience to “publishing” their research. Additionally, students are rewarded with monetary and category prizes.

The goals for Image of Research are threefold:

- Provide students with an opportunity to reflect on what their research means to them and how to represent that research in a visual manner
- Proactively engage with undergraduate students as creators of information
- Address educational issues around scholarly communication by designing learning opportunities that help students confront the complexities of copyright and their online presence

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At Illinois, project personnel were inspired by the University of Chicago Library's Image of Research competition, established in 2008 (<http://grad.uic.edu/image-research-exhibit>), and KU began their competition after reading about Illinois in a column for *C&RL News* outlining examples of the intersections of scholarly communication and information literacy.² Both libraries were looking for avenues to engage with undergraduate students participating in high-impact educational practices as part of wider information literacy and outreach goals.

Background

University of Illinois at Urbana-Champaign

The competition at the University of Illinois began in spring 2014 with both graduate and undergraduate student versions and is sponsored by the library's digital scholarship center.³ Entrants were asked to submit images of, or reflective of, their research or research process. Broadly speaking, research is an iterative process that involves asking questions, seeking answers from multiple information sources, and remaining open to new or contradictory ideas; creating visual representations can be a challenge for researchers at any stage of their career. Because definitions of research and the research process vary from discipline to discipline, Illinois expected to receive many different representations of research in the images. Project personnel wrote the Illinois competition details and requirements to be as inclusive as possible to students from all disciplines.⁴ First, undergraduate students must be registered and in good standing for the semester, and they are encouraged to seek support from a faculty mentor. To date, all of the students who entered the competition were engaged in an undergraduate research program within their discipline. Support from faculty mentors is crucial as students learn to talk about their own role in the research process and seek guidance on complex issues such as research ethics.

Second, there are a few specifics students must follow to submit an entry (e.g., file type, size, resolution). These requirements have been refined over time to make sure images submitted can be viewed clearly online and printed. All images for Illinois must include a 100–200-word narrative explaining the connection to the students' research in layman's language. Students may collaborate with a faculty mentor and may only submit images where they are the principle creator of the image. Third-party content can be used as long as it is mixed with other content to create an original work. Students using such content must either abide by fair use or have permission from the copyright owner to share the image(s). As part of the submission process, students must accept competition rules based upon language from the institutional repository guidelines that were originally vetted by campus legal counsel. The

agreement the students sign as a click through is a nonexclusive license that grants the library the ability to use the submissions for archiving, promotion, and marketing purposes, while students retain all copyright. All student work is archived in the institutional repository, providing the library with a formal record of the competition and the students with a permanent URL for their résumés. Submissions are gathered through an online webform. The competition is marketed through Office of Undergraduate Research's (OUR) Advisory Board, through OUR's and the library's social media accounts, through email communication between subject liaison librarians and teaching faculty, on the digital signage in the libraries, and through an ad in the student newspaper. Information about the competition and past winners can be viewed at <https://publish.illinois.edu/imageofresearch-undergrad/>.

The Illinois competition is open for eight weeks at the beginning of the spring semester. The library received the most undergraduate submissions in its initial year: twenty-three submissions in 2014, eleven in 2015, sixteen in 2016, and eleven in 2017. Most of the students are identified with science disciplines, with 71 percent of the entries coming from STEM, 15 percent from fine arts, and only 14 percent from the social sciences. Juniors and seniors make up the bulk of the entries, with only a few freshmen and sophomores. This may reflect the demographic of students participating in high-impact educational practices, such as undergraduate research, which tends to recruit students who are further along in their academic careers.

Submissions are judged on three criteria: originality, visual impact, and connection among image, text, and research. These categories are meant to be broad and to allow the judging panel substantial leeway in making decisions about the awards. Judges are recruited from the library, OUR, and among the teaching faculty. The awards at Illinois are substantial (\$300 for first place and \$200 for second place) and funded by a generous donation from the Illinois Division of Intercollegiate Athletics.⁵ Since the library is committed to recognizing as many pieces of student work as possible, one or two honorable mentions are also awarded. The winners are celebrated at the annual Undergraduate Research Symposium held during Undergraduate Research Week in April. Each submission is printed on a poster board (appropriate for framing by the students) and displayed at the entrance of the venue for the symposium. In addition, all entries are displayed on the digital monitors at the Illinois Undergraduate Library and the Main Library, shared in an Omeka.org exhibition (discontinued 2017), and shared on the library's Instagram account (as of 2017).⁶

University of Kansas

In spring 2015, after the publication of "Weaving the Threads: Scholarly Communication and Information Literacy"⁷ describing the Image of Research

competition at Illinois, the KU Libraries initiated its own pilot competition directed at undergraduate students.⁸ KU's competition relied on Instagram as the primary platform for submission, though email submissions were also permitted. Like the Illinois competition, entrants were asked to submit images of, or reflective of, their research or research process. Entrants were also asked to include brief text in layman's language (approximately 50–100 words) accompanying the image and to tag the entry using the competition hashtag, #KUImage15. Unlike Illinois, multiple submissions were encouraged in an effort to capture the dynamic, reflective nature of the research process and the evolution of the researcher's perspective over time.

Goals of the KU pilot were to develop a brand for the competition and build a sustainable infrastructure to support submissions and their evaluation. A small project team (consisting of staff from the Center for Undergraduate Initiatives & Engagement, Office of Communications & Advancement, and Digital Initiatives & Discovery Services Division) published promotional flyers, a webpage, and a webform (See Appendix 13A: Promotional Flyer). There were a few additional differences between the Illinois and KU competitions. Guided by an NPR article on photo contests, the KU team also created an If This Then That (IFTTT) "recipe" to autopopulate a Google Sheet each time an image was added to Instagram with the competition hashtag.⁹ Following submission, students were directed via Instagram Messaging to the competition webform in order to verify their eligibility, accept the contest terms, and provide the libraries a nonexclusive license to use their submissions in a variety of ways, including for research and marketing. The competition was marketed via the libraries' and its partners' social media channels, table tents, and email communication with teaching faculty, who were asked to share the promotional flyers with their students. Additionally, the project manager directly emailed Undergraduate Research Symposium presenters using a contact list provided by the university's Center for Undergraduate Research, which hosts the symposium each spring and provides financial support to undergraduate student researchers.

The competition was open for submissions for approximately two weeks in early April. The libraries received twenty-eight submissions from seventeen entrants. Eleven of the entrants were seniors, five were juniors, and one was unverified. Thirteen majors were represented, and seven of the students were enrolled in the KU University Honors Program. Entries were pre-screened by library staff, who were instructed to flag any entries that did not meet the requirements of the competition or that were verbally abusive, grossly offensive, or otherwise inappropriate. Four judges were recruited from across campus reflecting expertise in the visual arts, humanities, and sciences. This multidisciplinary panel of judges selected a grand-prize winner and additional winners in the following award categories: Originality, Visual Impact, Social

Impact, and Connection. The grand-prize winner received \$100 and each category winner received \$50. A poster collage of all eligible entries was framed and displayed in the Learning Studio at Anschutz Library alongside individual prints of the winning submissions.

In the competition's second year, the project team maintained the infrastructure and marketing strategies developed in the pilot but expanded the competition's web presence, which included adding a new collection for winning entries to the institutional repository, KU ScholarWorks, and developing an online form for web submissions.¹⁰ Additionally, the libraries hosted an awards ceremony that featured lightning talks by Image of Research winners. In alignment with the strategic priority of proactively engaging with researchers to advance scholarship and improvement in scholarly communication, the libraries also developed an educational copyright series shared with students via social media and invited two speakers from KU Libraries' Shulenburg Office of Scholarly Communication & Copyright to present at the awards event about visibility and the ethos of Open Access.¹¹ Compensation remained the same, but award categories were expanded and adjusted to reflect knowledge practices and dispositions described in the ACRL *Framework for Information Literacy for Higher Education*.¹² A "Research Is a Process" award was added to encourage multiple entries and eligibility was restricted to entrants who submitted a minimum of three entries on the same subject. A new, sponsored award, "Open for Collaboration," was based on the theme of Open Access Week 2015. "Story of Research" and "Vision" awards emphasized the quality of submitted text and image, respectively. A "Libraries Choice" award, created to honor submissions that reflected library spaces, resources, or services, was not awarded due to a lack of submissions meeting the criteria for the category (despite an abundance of such submissions the previous year). Descriptions of each and additional information about the competition are available at www.lib.ku.edu/ior. Following a request by judges who served during the first year, a rubric was developed and provided to year-two judges to assist with prioritizing and eliminating submissions.

In its second year, the competition accepted submissions for approximately six weeks, opening near the end of the fall semester and closing a few weeks into the spring semester. The libraries received forty-five submissions from seventeen entrants, though only thirteen of the entrants accepted the contest terms (at least one was a graduate student and therefore ineligible). Of those, nine were seniors, three were juniors, and one was a sophomore. Three of the five award winners accepted the invitation to present at the awards ceremony. An invitation was also extended to and accepted by one of the award winners from the previous year. Additionally, all of the submissions were shared with KU's Center for Undergraduate Research, which selected one image for their annual Undergraduate Research Symposium program cover and marketing materials.

Partnerships

To gain the attention of students, partnerships with departments and campus organizations that work with undergraduate researchers are essential. Both institutions cultivated relations in order to reach faculty mentors and others working closely with the students on a daily basis. These groups were invited to contribute to the competition by providing feedback on competition rules and participating in the judging process. At Illinois, OUR invited the project coordinator to speak to their Advisory Board about the competition to raise awareness on campus and provided the space and resources to celebrate the winners at the annual symposium. At KU, partnerships with the University Honors Program and the Center for Undergraduate Research provided invaluable opportunities for the project coordinator to interact directly with students engaged in research. Both organizations invited the libraries to conduct outreach at their events, provided information about students' research schedules, and participated in brainstorming sessions.

Reflection

The hallmark of high-impact educational practices involves opportunities for students to share and/or present their research (e.g., posters presentations, presentations at student conferences, publication in undergraduate research journals).¹³ Given that Image of Research is a mechanism for visualizing research, both institutions have gained considerable insight into running a competition and working with students on sharing their research. Since most entrants are juniors and seniors, project managers suspect this is an indication that students at lower levels are reluctant to consider themselves researchers. One goal is to reach out to freshman and sophomore students participating in undergraduate research and offer extra assistance to better prepare them for submitting an entry to the competition as well as to share their research more widely.

The nature of the competition lends itself to exploring the intersections of scholarly communication and information literacy. At Illinois, project personnel are working on developing a series of workshops geared toward the needs of undergraduate researchers including: (1) data management, (2) authors' rights issues from the perspective of students owning their copyright, and (3) research visualization in the social sciences and humanities. Illinois plans to pilot the new workshops in spring 2018.

During the second year of Image of Research at KU, the project manager developed a copyright education series that was shared on the libraries' social media channels. Goals of the series were twofold: to market the competition

and to introduce students to basic copyright concepts. The libraries shared catchy images and short facts about copyright while also modeling best practices in attribution. Posts discussed the recent news story of “Happy Birthday to You” entering the public domain, how copyright is a bundle of rights as opposed to a single right, and details of Creative Commons licensing. KU aimed to share information with students in informal ways; the drawback of this approach is the inability to measure direct impact on student behavior. Additionally, KU crafted copyright language in the competition’s terms and conditions, specifically to simplify language to promote student learning about such agreements. A future goal of the project manager was to develop an FAQ to replace the formal rules and guidelines, a goal shared by Illinois.

Marketing the competition is at the top of both institutions’ lists for improvement. It is apparent that project personnel need to find better ways to reach students, especially in the humanities and social sciences. The project manager at Illinois has reached out to the student newspaper to publish an article on the competition in fall 2017 with the hopes that students will plan ahead for spring 2018. At KU, the project manager emailed the student newspaper prior to the awards ceremony to alert the editorial staff of the event, which resulted in a long article about the awards and presentations.¹⁴ Additional local press opportunities could be explored prior to and during the period of open submissions to make the competition more visible to the campus and local community.

Both institutions experienced unanticipated situations. Even though students sign an agreement during the process of submitting their entry that states they agree to share their image for archiving and marketing purposes, Illinois had three students in the past four years ask to have their entries removed from the institutional repository after the competition was complete. Two cited future publication as the reason for removal; one didn’t properly communicate with his or her faculty mentor prior to submission and the faculty member expressed ownership of the image. In all cases, the library immediately complied with the requests by suppressing the entries in the institutional repository and removing the entries from the Omeka and/or Instagram accounts. While all students confirmed they had read the agreement, they also confessed to misunderstanding the implications. In response, Illinois is considering re-wording the agreement in plain language to mitigate this from happening in the future.

Another complication arose in making award payments to students. At Illinois, paying student awards is complicated by student status. For example, US students can be paid through their student account with any debt on the account being paid first. However, if the student claims international status, they must provide additional paperwork to process an award. In both cases, students are responsible for any tax liability as it applies to income. The li-

brary is clear about this situation with the students ahead of time, but each year the situation must be monitored by the library Business Office to make sure all campus and federal rules are being followed carefully.

KU experienced complications from taking submissions through Instagram. Relying on social media for accepting submissions posed several challenges. First, a number of submissions were not viewable because they were tagged from private accounts. Other Instagram users temporarily adjusted their privacy settings from private to public, resulting in a reduction of final submissions tagged with the competition hashtag that are visible on social media. Second, directing students from Instagram to the web form for accepting terms and verifying eligibility was a manual process that frequently required multiple attempts. In some cases, students created public Instagram accounts solely for submission and then did not monitor the account to receive communication from the libraries. Additionally, the use of Instagram as the submission platform may have prevented students from investing more time and energy into the submission process.

Assessment

Assessment is a priority in the continual development and improvement of Image of Research. The competition at Illinois is moving into its fifth year in 2018. To date, the Illinois project team has relied mainly on quality of submissions and student feedback. Since submissions went down by almost half since its inception, Illinois is working on a plan to better reach faculty mentors and students directly through their undergraduate research programs. Informal student feedback has been positive, and several students have entered the competition in back-to-back years. However, it is evident from the entries that students who are most aware of the competition are from STEM disciplines. It is also possible that STEM students are taught through their research process about ways to visualize data that social science and fine arts students are not. Planning meetings in summer 2016 and spring 2017 have resulted in several ideas for increasing participation:

- Similar to KU, develop an in-person celebration event where entrants get to meet one another and share with their faculty mentors.
- Work with subject liaison librarians to share competition information during instructional sessions.
- Perform direct outreach to undergraduate research courses identified through OUR to promote marketing materials and offer five-minute promotional presentations during course time.
- Share past competition entries through marketing, including student newspaper and directly to faculty mentors.

- Offer drop-in library workshops on how to visualize data and include information about the competition.
- Create feedback survey for entrants asking about their experience as well as suggestions for improvement, including how to engage their peers.

To date, KU has focused on student feedback to assess the Image of Research competition. In surveys and emails, student winners expressed gratitude for the opportunity to meet other students involved in research and to share their research with others (both by presenting and by bringing their friends and family to the Image of Research display in the Learning Studio at Anschutz Library). One student comment from the awards event read, “I am blown away by the individual stories and caliber of research for undergraduates at KU. Everyone is so enthusiastic and engaged!”

The libraries also promoted the competition by tabling alongside KU’s Center for Undergraduate Research during an event held near the front entrance of the libraries’ Learning Studio, during which the Center offered free doughnuts. The majority of students who approached the table reported that they were aware of the competition. Some expressed reluctance due to a perceived inability to capture their research in an image. Only a small number of students who expressed interest in the competition submitted entries. However, the experience did result in the recruitment of one student who provided input on event planning and who was later designated the libraries’ Image of Research “ambassador.” The student was recognized as such during the awards ceremony, during which she was provided a small award, and has volunteered to lead efforts to recruit participants during the third year of the competition. Unfortunately, the competition was not conducted in the third year due to staff transitions.

During the second year of the competition, personnel from KU Libraries’ Research and Learning Division developed a rubric based on the ACRL *Framework* to better understand undergraduate perceptions of research. The rubric defined six criteria that could be observed in competition submissions, each connected to one or more of the frames, with scoring metrics for high performance, low performance, and not observed. The rubric remains in draft form and has not yet been applied to submissions. See Appendix 13B: Image of Research Rubric based on the ACRL *Framework*.

Recommendations/Best Practices

1. Engage students early and often. We surmise that our marketing strategies would be more successful if we could engage past entrants to carry the message of the competition. One possibility might be to recruit an

Image of Research “ambassador.” As students tend to listen to their peers, this could potentially be more effective than presenting the competition in courses ourselves.

2. Think critically about your expectations and whether submission mechanics encourage or discourage the depth of reflection you hope to see. KU found that judges were critical of submissions, hoping for longer written text with greater detail, which led us to question if there might be a disconnection between expectations and the use of social media as a submission platform. Entries submitted via KU’s webform were longer and more thoughtful than those submitted via Instagram. Illinois used a traditional online form and saw well-developed narratives submitted with the images.
3. Look for as many avenues as possible to share student work and join in the celebration of their achievement. Printing student images with the narrative text on a poster board that can be framed is highly valued by the students and worth the investment. Holding an event with students and their faculty mentors, especially if students have an opportunity to publicly discuss their entry, brings an element of ongoing conversation to their research and an experience that will help in the future when discussing their work. Financial rewards are not imperative, but students appreciate the incentive. At Illinois, while we do not dictate how the money should be used, we do encourage students to consider presenting their work at future student and/or professional disciplinary conferences.
4. A component of Image of Research is professionalizing the undergraduate experience by “publishing” student work. This can be done in many ways as has been demonstrated by KU and Illinois: archiving entries in the institutional repository, sharing images and text through social media such as Instagram or Twitter, publicizing through digital signage in the library and across campus, creating an online exhibit (e.g., Omeka), reaching out to campus and local news organizations, and posting winners to the competition, library, or campus website. Students are keen on sharing their work, and libraries, with their developing publishing activities, can make this happen.
5. Use the opportunity to explore avenues to increase advanced information literacy skills through instructional efforts in partnership with offices of undergraduate research and teaching faculty. For example, visualizing research and presenting data are not easy to learn. While the library may not be best positioned to teach data visualization by the discipline, we are able to begin the conversation by offering sessions on data visualization tools and data management.

Conclusion

Overall, the Image of Research competition provides libraries with an exciting opportunity to work with students around the intersections of scholarly communication and information literacy while celebrating original student work. The competition can also complement other types of research awards often supported by libraries and has the potential to generate new or deepen existing partnerships across campus with faculty, undergraduate research offices, and others who support undergraduate researchers. The competition challenges students to think about their research in a different way, to reflect on their journeys and discoveries, and to consider how their work can be communicated visually. It weaves student perspectives and research activities into the institutional history of the university and showcases student researchers as important and worthy contributors to scholarly conversations. It provides students with public accolades that can be valuable additions to job, scholarship, or graduate school applications. With all that Image of Research has to offer those who engage in the process, it's not surprising that such competitions have been sponsored by universities and organizations across the globe.¹⁵

Appendix 13A: KU Promotional Flyer

Image of Research



kulibraries
University of Kansas Libraries

1. Take an original photo inspired by your research & post to Instagram[□]
2. Include a description connecting the image to your research
3. Tag it with the hashtag #KUImage16
4. Follow and tag us on Instagram @KULibraries
5. Win up to \$100!*



Entry deadline: 5 p.m. Friday, February 5, 2016
Complete rules and details at lib.ku.edu/ior

[□]Or use online submission form

*Some restrictions may apply

KU LIBRARIES
The University of Kansas

Appendix 13B: Image of Research Rubric based on the ACRL Framework

Image of Research Rubric				
Criteria	Connection with Frames	High Performance	Low Performance	Not Observed
Respects the original ideas of others	Information Has Value; Scholarship as Conversation; Authority is Constructed and Contextual	Submission includes textual attribution to source(s) consulted during the research process.	Text acknowledges the work of others but does not include specific attribution to a source or author.	
Seeks guidance from experts (e.g., librarians, researchers, mentors)	Searching as Strategic Exploration; Research as Inquiry	Text or image reveals consultation with a librarian, researcher, or other professional.	Text or image indicates that help from an expert is needed but does not indicate that help was sought.	
Maintains an open mind	Research as Inquiry; Authority Is Constructed and Contextual	Describes how the research and/or researcher changed over time in response to new questions/knowledge.	Describes research as a validation of the entrant's initial impression or opinion of a subject.	
Sees self as contributor to information marketplace rather than only consumer	Information Has Value; Scholarship as Conversation	Submission shows evidence of engaging in the scholarly conversation (e.g., group discussion, conference/poster presentation)	Acknowledges possible realms of scholarly conversation or identifies barriers to joining the scholarly conversation.	

Image of Research Rubric				
Criteria	Connection with Frames	High Performance	Low Performance	Not Observed
Recognizes that ambiguity and disagreement can benefit research	Scholarship as Conversation; Research as Inquiry	Clearly articulates a gap, inconsistency, or unresolved problem in the knowledge or scholarly output of a discipline.	Submission acknowledges the existence of competing perspectives.	
Responds appropriately to the information need articulated in submission guidelines	Information Creation as a Process; Information Has Value	Clearly articulates connection between image and research to a lay audience.	Relies on jargon and/or fails to articulate connection between image and research.	

Notes

1. Image of Research: Overview, accessed January 4, 2017, <http://publish.illinois.edu/imageofresearch/>.
2. Stephanie Davis-Kahl, Terri Fishel, and Merinda Kaye Hensley, "Weaving the Threads: Scholarly Communication and Information Literacy," *C&RL News* 75, no. 8 (September 2014): 441–44, accessed May 3, 2017, <http://crln.acrl.org/index.php/crlnews/article/view/9179/10146>.
3. University of Illinois at Urbana-Champaign Library, "Scholarly Commons," accessed January 12, 2017, <http://www.library.illinois.edu/sc/>.
4. University of Illinois at Urbana-Champaign Library, "Image of Research," accessed April 2, 2017, <https://publish.illinois.edu/imageofresearch-undergrad/competition-details/>.
5. The Illinois Department of Intercollegiate Athletics donates money to support students' activities across campus, and in 2008, the library received funds to support the newly designed digital scholarship center.
6. The decision to move from Omeka.org to Instagram at Illinois was made in concert with the Graduate College, which manages the graduate version of Image of Research, in order to better align both contests and to reduce duplication for the location of the online "publishing" of student work. The Omeka platform was sufficient for its purposes and we would recommend its use for other institutions.
7. Davis-Kahl, Fishel, and Hensley, "Weaving the Threads: Scholarly Communication and Information Literacy," 2014.

8. University of Kansas Libraries, Image of Research, accessed May 3, 2017, <https://lib.ku.edu/iior>.
9. Emily Bogle and Alyson Hurt, "Managing Instagram Photo Call-Outs," *NPR Visuals Team (blog)*, May 29, 2014, accessed May 3, 2017, <http://blog.apps.npr.org/2014/05/29/photo-callouts.html>.
10. KU ScholarWorks Image of Research Collection, accessed May 3, 2017, <https://kuscholarworks.ku.edu/handle/1808/20209>.
11. University of Kansas Libraries, "Goal 2: Advance Scholarship through Proactive Engagement in Research and Scholarly Communication," *KU Libraries Strategic Directions 2012-2017*, accessed May 3, 2017, <https://lib.ku.edu/strategic-plan/goal-2>.
12. Association of College and Research Libraries, *Framework for Information Literacy for Higher Education*, accessed May 3, 2017, <http://www.ala.org/acrl/standards/ilframework>.
13. Association of American Colleges & Universities, "High-Impact Educational Practices," accessed January 28, 2017, <https://www.aacu.org/leap/hips>.
14. Alex Robinson, "Award-Winning Undergraduate Students Present at Second Annual Image of Research Competition," *University Daily Kansan* (Lawrence, KS), March 23, 2016, accessed May 3, 2017, http://www.kansan.com/news/award-winning-undergraduate-students-present-at-second-annual-image-of/article_fe5108c0-f131-11e5-8a03-17bc2f904584.html.
15. The University of Saskatchewan, University of Alberta, University of Leicester, University of Strathclyde, and University of Manchester are among a growing number of organizations offering an Image of Research or similarly themed competition.

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