

I have an idea, why not just remove the paper from the printers, and have everyone provide their own, when needed.....it's an idea - I like the CD thing too :-) Hope you are well!!!!

Sharon A. Mueller, R.N., M.A.
Program Coordinator/Director - C.O.P.E.
Community Osteopathic Professional Educ.
Ryan Hall Room 110 1-515-271-1094
3200 Grand Avenue, Des Moines, Iowa 50312

Sharon.Mueller@dmu.edu

As a grad student who likes to have hard copies of things, I understand printing things. However, UNO charges students per page of printing. We can put money on our student ID cards to swipe to print. The cost is marginal, but it helps them get some funds to help pay for the toner and paper. If we print in color, it is hella expensive (something like \$0.75 per page). Allowing free printing is something of the past and the students should get charged. It is a deterrent for excessive printing.

Gary

Gary L. Beck
Education Administrator & Coordinator,
Undergraduate Medical Education
Department of Pediatrics
University of Nebraska Medical Center
982184 Nebraska Medical Center
Omaha, NE 68198-2184
<http://www.unmc.edu/Pediatrics>
Office: 402-559-7351; Fax: 402-559-5137
gbeck@unmc.edu

Marshall,

We had a similar problem. The students made it clear they wanted paper copies so we now print and compile everything from a module, take it to CopEz and they print course packs, which the students pay for. The biggest saving for them was time spent printing. If you are interested in the logistics I can get more information from our Med 1&2 coordinator. She was involved in all aspects of

this arrangement, beginning with student complaints about printing things out themselves--then went to providing free printing in our library (that had problems) to the current arrangement which seems to work.

Hope this was helpful.

Eileen

Eileen Mehl
Program Manager
Office of Academic Services
B013 Graves Hall
333 W. 10th Ave.
Columbus, OH 43210
eileen.mehl@osumc.edu
614-292-9952
FAX 292-0745

We very much have the same situation, exacerbated by the faculty posting of PowerPoint presentations with light letters on a dark background, which eats toner for breakfast. We have and are educating faculty to save the pretty backgrounds for lecture but post plain black and white (as possible) for students, realizing that Pathology, for example, will have to use some images.

Considering that we used to print handouts for students, some of the cost is inherent in our educational system. However, the availability of PPTs certainly must double (at least) the printing and use of resources.

We also notice that students forget to print out materials ahead of time and there's a long line during the break between classes at the library printer.

We've discussed having all handouts and PPTs pre-printed, professionally, for students and ready at the beginning of the semester, but our faculty don't seem interested in working that far ahead.

I look forward to reading the responses.

Margaret

Margaret T. Maynard, PhD
Assistant Dean, Medical Education and Evaluation
UIC-College of Medicine at Rockford
margem@uic.edu
O: (815) 395-5588

The University of Missouri has a centrally controlled print program where each student has an allocation of 250 pages. When they run out, they are out for the year. For a PBL curriculum, 250 is not much so if they are doing handouts or printing off articles (our students are exactly like yours, they print everything imaginable), they usually designate someone to print a copy and then they use the copier. They also have copy cards that provide a set number of copies, but the copy cards can be recharged if it is justified. We no longer have abuses of print or copy such as printing large numbers of journal articles or reports, picnic announcements, cartoons etc.

Michael C. Hosokawa
Associate Dean, Curriculum
Professor, Family Medicine

(573) 882 2923
fax (573) 884 2988

Marshall,

We have exactly the same problem and tried, as an experiment, putting all of the lectures and notes for a course - including some H&P videos - on a CD that was given to students free. About 1/4 of the class choose to walk up to the Educational Office and collect this CD. In a survey of their reactions, those who used the CD were split exactly 50/50 on whether they preferred the CD to Blackboard (the existing delivery method) and the vast majority preferred paper handouts to either of the electronic media. When asked 'if you could only have one medium, CD or BlackBoard, which would you prefer?' they were 100% in favor of BlackBoard over CD. All in all, students reported being so satisfied with BlackBoard that they didn't see any value added to the CD and saw several areas where the CDs were inferior.

Several faculty have expressed an interest in converting to CDs, for the same reasons you've mentioned, but it is hard to get students to convert.

The two most commonly cited difficulties with the CD format were: the inability to annotate onto the CD (the discs were ROM due to issues with copyrights and modifications of materials), and that during the time lag between burning the CD and the actual lecture delivery some lecturers changed their ppt slides or lecture content but the CD couldn't be updated to reflect those changes.

My feeling is that tablet PCs may eventually be the way to go, but that's a can of worms for a different day.

Please share with me any other information you receive on this topic.
Thanks!

Hugh

Hugh Stoddard, M.Ed., Ph.D.
Director, Curriculum Development Office
University of Nebraska College of Medicine
hstoddard@unmc.edu
UT 5163 (2215)
(402) 559-7837

Marshall

Sue suggested I pass on what we are doing, which is charging for printing. It was 7 cents a page, but with the Student Technology fund subsidy this year it is going to 4 cents a page. We were hit heavily when we moved to ANGEL several years ago, and profs began loading everything into ANGEL. When we began charging, the faculty that had the most pages online realized that the printouts were costing the students heavily, and some of those with the most pages went to using course packs in collaboration with the bookstore.

With the charging mechanism we use, the student doesn't pay until they go to the printer. So if they've accidentally printed multiple copies, they can just delete the print job. If they leave it without either printing or deleting it, it gets deleted after a couple days. We use the Pharos software to manage the system. It requires a cheap pc to control the job at the printer, and space on a server to run their queuing program.

Jim Morgan

You are probably correct that they will just print from the CD.

UW School of Medicine and Public Health uses Print Manager Plus

<http://www.amtsoftware.com/Print-Manager-Plus/> in the Health Sciences Learning Center Informatics Lab.

Students have user accounts in Windows Active Directory and are assigned a print quota at the beginning of each semester. For further information, please contact Adrian Gay (adriang@wisc.edu).

Rachel L. Baker
Desktop Systems Support
UW Health Sciences Learning Center
750 Highland Avenue
Madison, WI 53705
608.262.7773
rbaker@wisc.edu

Hi Marshall, I fear that until one can make a computer small and light enough and powerful enough to look like a book, act like a book and feel like a book; you will have students making digital images into a book. Reading paper is easier on the eyes, finding material is easier, and comparing different pages is easier. It will be awhile before such things can be as easily done with a computer.

Mark Albanese

we have a system where students are given a code which they have to enter each time they print, and each student has so many copies a

year (some reasonable #). this has helped a lot. also, we are trying to make all printers default to double sided printing.

Gautam J. Desai, D.O.
Physician Educator, Department of Medical Affairs
Associate Professor, Department of Family Medicine
EP 438
Kansas City University of Medicine and Biosciences
College of Osteopathic Medicine
1750 Independence Avenue
Kansas City, MO 64106-1453

816.283.2451 - phone
816.283.2251 - facsimile

Hi,
Well, we found out that free is definitely abused when it comes to printing. So, we purchased the OCS software from Canada. With this product, you can charge per copy or assign a set number of free copies that can be made. If you tell them that they have to pay after the free ones are gone, they might be more cautious in their printing choices...It works for us! It does, however, involve adding and deleting names to the program...

Martha Studaker, AMLS, AHIP
Director, Hamady Health Sciences Library
Hurley Medical Center, One Hurley Plaza, Flint, MI 48503-5993
810-257-9089 FAX 810-762-7107
mstudak1@hurleymc.com

Hello Marshall,
We have the same problem you described in your note. I am very interested in learning what others have done to discourage excessive printing.
Thank you,
-Mary

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Mary T. Aiello, M.A.

Year 2 Coordinator
Director, Standardized Patient Program
SIU School of Medicine
P.O. Box 19622
Springfield, IL 62794-9622

217-545-7126
217-545-0192 fax
maiello@siumed.edu

This is our policy for printing at the university of
Missouri- Columbia

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Photocopy service

The copy machine is located in the copy room, HSL-201, of the library. It works on a "Venda-card System." Each student is issued a card, similar to a credit card, which has a certain number of copy "credits" programmed into it.

First and second-year students will receive a quota of 750 copies per semester. Third and fourth-year students receive 100 copies per semester.

At the end of each time period, you will turn your card in to the Medical Education Office to have it reprogrammed for the next time period allotment.

Please do not feel obligated to use your entire allotment. The money designated to pay for these copies is money, which is intended for student use. Therefore, any money saved is student money. On the other hand, there are many times when you need to make photocopies for class or for study aids. Now you can do that without worrying about having pocket change.

Jen Rachow
Administrative Assistant
UMC School of Medicine
Office of Medical Education

MA215 Medical Sciences Building
Columbia, MO 65212
Office (573) 884-5146
Fax (573) 884-2988

Sell course packs. Oh wait didn't we used to do that before the web. -Andy

Hi Marshall,
Possibly go back to the undergraduate system of allowing so many copies per year then charge a blanket amount to cover the next 1000 pages etc. This does require a "counter" system of some sort upon student login to keep track of copies. Our students certainly don't need further expenses but do on occasion need reminders of environmental responsibility. Along with a managed system, you might just share your cost concerns with your students...anything to get them to think twice before printing out everything. You might even mention small copy savers such as printing out their CD Power Points in outline form if indeed they are going to print them. I will be interested also in other ideas that people have along these lines...thanks for asking!
Brad Clarke

We eliminate totally free printing a couple of years ago. Students pay for their own printing through a credit system at copiers that are readily available. Many students have their own printers at home. We've done the CD hand-out too, but there are some copyright issues with that if there is copyright material on them. It will cause a big moan when you inform the students that there is no more free lunch - but really, money does not grow on trees! Dean

Hi Marshall,
Years ago our paths crossed when I worked in the IUSOM Dean's Office. I worked with Deans Carter and Ficklin and made a few trips to the NW Center as well as the other Centers for Med Ed. In any case, to your question. In our Ambulatory Clerkship, we posted the didactic materials at the website and burned to CDs, but also included the printable outline versions of the PowerPoint files. Retaining just the text, this reduced what might have been a 10-page print

job to 2-3. We gave students specific instructions to review the ppt files, particularly those with photos and other graphics, but to print the outlines. It no doubt reduced the amount of printing, but I can't estimate just how much. You're raising an issue that seems fairly benign, yet the mounting costs are being transferred somewhere, usually to the medical library. Trying to change the behavior of our students, who like the faculty tend to hit the print key without thinking, needs to be part of the solution.
terry

Terry Bahn, EdD
Director of Outreach & Engagement
AHEC Administrative Director
The Ohio State University College of Medicine
056 Meiling Hall
370 W. 9th Ave.
Columbus, OH 43210
ph: 614.292.2508
fx: 614.292.5364
bahn.3@osu.edu

Our library has instituted a policy where the students are charged a flat fee for printing privileges. They can print what they want after identifying their user name and password to the printer (there is a special program that runs all of this and all the printers that the students have access to are on this system). There is a limit for printing/quarter but the students say that it is more than ample for what they need. They have no choice but to pay this extra fee to cover the cost of paper, etc. It seems to be working well.

Gail R. Heimbürger, M.Ed.
Director, Clinical Skills Laboratory
University of Cincinnati, College of Medicine
PO Box 670552
Cincinnati, Ohio 45267-0552
(513)558-7724 office
(513)558-1165 fax

Gail.Heimbürger@uc.edu

Our courses make the copies for the students of all of the handouts, and charge them a fee to cover the cost of copying. At least that way they are done two-sided and save a few trees.

You could also have a page limit on the number of copies an individual student could print.

And you are correct, that most students still prefer to have a paper copy rather than CD. I understand this because I do not like reading large volumes of material on a computer screen either.

Kristi J. Ferguson, Ph.D.

Associate Professor and Director, OCRME

1204 MEB

University of Iowa Carver College of Medicine

Iowa City, IA 52242

319-335-8900

319-335-8904 (fax)

<http://www.medicine.uiowa.edu/ocrme>

Based on a purely economic standpoint, usually monetary fees are the best method to discourage superfluous printing, however, the drawback is in implementation as printers with keycard readers and software may be expensive to install. Still, in the long run, as with most technology, there is usually an increasing rate of returns. Student IDs or keycards can have maximum allowable printing capacity for a given time period (month, year, etc.) or a monetary value, which limits the amount of printing students can do. In this way, they will choose specifically which documents are most important to them. The CD is a great idea, which may discourage some printing especially when augmented with a stipulation/request (and explanation of the very reason for the CD) made to students to limit their printing only to necessary documents.

Still, I can only think of keycards/password locks, which will ultimately limit printing. With this 'lock' system in place, if some students really need a printout

(particularly those who have trouble reading from computer screens), you can have copy center make a pamphlet/printout available for a given price (cost of printing) for a particular student.

Sorry, I'm not sure of any other immediate solutions, but I'd be interested in hearing other suggestions. Good luck!

Regards,

Monica

nmh.edu

From: Ellison, Stefanie
Sent: Tue 6/13/2006 2:22 PM
To: wanders@ium.edu
Subject: Student printing

Dear Marshall,

I am the Emergency Medicine Student Clerkship Director for the University of Missouri Kansas City SOM. We too have a paper heavy clerkship and I would like to see less extraneous printing of the learning materials. We have Blackboard at UMKC and I was hoping to integrate our clerkship materials into that system so they could easily refer to the computer site at all of the hospital and SOM computers, rather than carry around a printed copy. Before going to this computerized method of distributing the course materials I would like to know if there are any other schools with access to Blackboard or who are currently utilizing it for their course.

Our faculty evaluation of students is 100% using a paper system and after multiple attempts to use the computer for evaluations we have returned to paper.

I think that is the only way to guarantee consistent faculty response. I would also like to hear other suggestions for successful faculty evaluation of students.

Thanks,
Stefanie R. Ellison, MD
Assistant Professor
University of Missouri Kansas City School of Medicine
EM Student Clerkship Director
Emergency Department
Truman Medical Center
Kansas City, MO

Hi Marshall!! We are feeling your pain. We are thinking about providing students with tablet PCs from IBM, which allows students to take notes on PDFs on their laptops. The advertising says that it reduces printing, but we shall see.

Larry Hurtubise <Larry.Hurtubise@osumc.edu>

Suggestions:

- 1) The CD is an excellent idea. Encourage them to print off of it at home.
- 2) Give the students a dedicated printer and charge them so much a sheet or include as part of their fees.

.....VNJ

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Victoria Nichols-Johnson, MD, MS, FACOG, FABM
SIU School of Medicine, Dept. of Ob/Gyn
PO Box 19640
Springfield, IL 62794-9640
Phone: 217-545-7938
Fax: 217-545-7958
E-mail: vnicholsjohnson@siumed.edu

Doesn't your library charge for photocopies - 5 pennies a page? Charge them the same per page of paper. That'll stop it real fast! Or sell them a ream for 5 cents times 500 pages = \$25
Fred McCurdy

Dr. Anderson,

We too struggle with students printing everything but do have a few suggestions. In our institution students already receive printed course packs with detailed lecture outlines; using a printing company is much less expensive than the computer based printer. PowerPoint presentations of lectures are posted to the course site in BlackBoard but are blocked from being printed; our rationale being that the notes provide the details that the PowerPoint highlights.

Any additional lecture notes that are needed during the course are also printed and distributed through our office. We are considering adding a device to each of our printers that will automatically print two-sided; this we hope will save paper.

I hope that this is helpful. If you receive other ideas please consider sharing them. Best regards.

Ron Spalding
Director
Conjoint Teaching Services
The Standardized Patient Program
313-577-1415

Hi,

This is common problem I have seen several place. Putting the files on CD or on a Blackboard site will be unlikely to reduce student printing and your related costs.

The students want to use the outlines and PPT printouts on paper to write class notes on as you have probably observed. Our med students use that approach all the time.

Only way I know of to control your printing costs is to put controls on printers that charge and are linked to student account cards. My wife is in Madison in PA program and they get an certain allotment of free printing and then would have to pay if go beyond free allowed copies.

Is an expense to putting those devices on printers and question of whether you want to do that.

Could contact someone in Madison in charge of student computer labs probably if want more info about their system. You could call their main IT number and ask for whoever runs student computer labs.

This is the link to their site - is a lab manager named and you might ask him about their system.

<http://www.doit.wisc.edu/computerlabs/>

John Staley

1301 University Avenue

jstaley@doit.wisc.edu <<mailto:jstaley@doit.wisc.edu>>