Ink: Increasing Worker Agency to Reduce Friction in Hiring Crowd Workers

Niloufar Salehi, UC Berkeley
Michael Bernstein, Stanford University
most end-users do not approach a market to hire an expert when faced with a challenge
WRITE AN SOP FOR GRADUATE SCHOOL APPLICATIONS.

Get expert feedback on the writing and flow of your statement of purpose. Price: $20

⭐⭐⭐⭐⭐ view reviews (95)

CREATE YOUR ACADEMIC CV.

Get an expert's suggestions on how to make your CV perfect. Price: $15.

⭐⭐⭐⭐⭐ view reviews (11)

EDIT YOUR PAPER BEFORE SUBMISSION.

Get help with outlining, editing, and proofreading your paper before you submit. Price: $20

⭐⭐⭐⭐⭐ view reviews (2)

www.inktutorials.org
Systems that give workers agency to define and manage tasks have lower friction in use.

- the challenge of friction
- ink
- deployment
Systems that give workers agency to define and manage tasks have lower friction in use.

- the challenge of friction
- ink
- deployment
peer-to-peer crowd work marketplaces not common destinations for end users
end-user friction in expert crowd work

discover: not aware of available expertise
author: crafting an effective job posting
search: searching for the right people
manage: managing the work

loss aversion: immediate and certain cost now outweighs the potential benefit later [Tversky and Kahneman 1992].
design crowd work hiring surfaces that reduce friction by giving workers agency to manage work and signal how their help may fit into end users’ needs.
How to Write a Statement of Purpose for Graduate School | The ...
Follow these tips to write an effective graduate school statement of purpose. Know what grad schools are really asking. Different grad school programs have different prompts. Be selective about the details you include. 3. Make your statement of purpose unique. Ask for feedback.

11 Tips for Writing a Powerful Statement of Purpose [Sample SOP ...  
How do you write a great statement of purpose that sounds original, but at the same .... Grad school admissions officers require the statement of purpose not just ...

Writing the Statement of Purpose | Berkeley Graduate Division
https://grad.berkeley.edu/admissions/apply/statement-purpose/

The statement of purpose should convince readers— the faculty on the selection ... If you graduated and worked prior to returning to grad school, indicate what ...

[Brandt et al. 2009]
How to Write a Statement of Purpose for Graduate School

When writing your statement of purpose for graduate school, focus on your specific plans and how the graduate program and its faculty will help you meet these goals.

Graduate study is not for slackers. It takes focus and determination to pursue an advanced degree. That's why admissions committees examine your statement of purpose (also called a letter of intent or research statement) very closely—they want to see whether you have the right stuff to succeed in grad school. Follow these tips to write an effective graduate school statement of purpose.

1. Know what grad schools are really asking.

Different grad school programs have different prompts. Nonetheless, they're all asking for the same four pieces of information:

- What you want to study at graduate school?
- Why you want to study it?
- What experience you have in your field?
- What you plan to do with your degree once you have it?

Admissions committees look for candidates with clear, well-defined research interests that arise from experience. With that in mind, your statement of purpose should reveal that you care deeply about your chosen discipline and that you have the
Systems that give workers agency to define and manage tasks have lower friction in use.

- the challenge of friction
- ink
- deployment
WRITE YOUR SOP FOR GRAD SCHOOL.
(SOP: STATEMENT OF PURPOSE)

FEEDBACK ON FINAL VERSION
An expert in academic writing will give you feedback

COMPLETE YOUR FIRST 5000 TASKS ON AMAZON MECHANICAL TURK.

HAVE A QUESTION?

CREATE YOUR POSTER FOR CSCW

FEEDBACK ON VISUAL DESIGN

www.inktutorials.org/
services as embedded tasks inside tutorials

PhD in socio-linguistics and expert in academic writing.

Price: $20

Former interviewer at software company.

Price: $20

COMPLETE YOUR FIRST 5000 TASKS ON AMAZON MECHANICAL TURK.

CREATE YOUR POSTER FOR CSCW

HAVE A QUESTION?
create your statement of purpose for graduate school
create your statement of purpose for graduate school
create your statement of purpose for graduate school

YOUR SOP NEEDS TO HAVE A STRONG THEME WHICH INDICATES THE PURPOSE OF YOUR APPLICATION.

This may come across as you brainstorm your main points in the next step or you may already know what it is. The theme is the thread that holds your essay together to prevent it from being a list of your qualifications and achievements. Themes should be one sentence long and connect your field of research to a purpose, whether a personal interest or a contribution to society.
create your statement of purpose for graduate school

First, the graduate program you are applying to usually has instructions about what they are looking for in your SOP or questions that they want you to answer. Use those instructions and questions to guide you in developing your main points.

In general, beyond the questions asked in the instructions and your theme, focus on your research past, present, and future. This is the most important point that you need to get across.

<table>
<thead>
<tr>
<th>THE PAST:</th>
<th>THE PRESENT:</th>
<th>THE FUTURE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your academic background. What got you interested in the field of</td>
<td>Where you are now in your academic plan. What classes have you</td>
<td>Where you will go from here with the opportunities graduate school</td>
</tr>
</tbody>
</table>
create your statement of purpose for graduate school

**STRUCTURE**

At this point, you will construct an outline to organize all of your main points into a coherent message.

Your Statement of Purpose will usually be around 2 pages, which is 8-10 paragraphs for you to relate all of your main points. Think about each paragraph and what the main message is going to be and how that message relates to your theme.

Recall the instructions given by the institution that you are applying to. Keep these in mind as you fill out your outline, making sure to hit every point. You don’t have to answer the questions in the order they appeared in the application form. Be sure to say the most important things sooner than later.
create your statement of purpose for graduate school

<table>
<thead>
<tr>
<th>INK</th>
<th>START</th>
<th>1. THEME</th>
<th>2. MAIN POINTS</th>
<th>3. STRUCTURE</th>
<th>4. FINISH</th>
</tr>
</thead>
</table>

**FINISH**

THE FINAL STEP IS WRITING THE “MEAT” OF YOUR ESSAY. TAKE EACH PART OF YOUR OUTLINE (THE SKELETON) AND FILL IN THE STEPS. ALWAYS AS YOU WRITE, REMEMBER THE THEME OF YOUR ESSAY.

Each paragraph should have an opening and a concluding sentence. One sentence in each paragraph should be the key point, with the other sentences supporting it.

Make sure each sentence clearly contributes something to the point!

**WRITING TIPS:**
create your statement of purpose for graduate school

FEEDBACK

An expert in academic writing will give you feedback on the writing and flow of your essay. Price: $20

[Learn more].

SUBMIT
ink common task types

**EXPERT FEEDBACK**
An expert in academic writing will give you feedback on the writing and flow of your essay. Price: $20

**COACHING SESSION**
Schedule a 30 minute one-on-one CV coaching session for personal help. Price: $20

**PROGRAMMER**
Send me your content and layout and I will code your personal website in HTML/CSS. Price: $15

**DESIGN/ART**
Upload your content and a professional visual designer will design your personal website. Price: $40

**Q&A**
Have a question about making money on Amazon Mechanical Turk? Ask a professional Turker. Price: 50 cents

**RECORD PERFORMANCE**
Record yourself giving your talk and an expert will give you feedback on your talk’s content, your speaking, and your slides. Price: $10
submitting a form vs. drafting a hiring contract
create your statement of purpose for graduate school

Hi,

Sue [...] will be giving you feedback [...]. Please Paypal $20 to her at [...]. She will send your feedback by Tuesday, December 9th.

- Ink team
create your statement of purpose for graduate school

“Thank you for your quick response time and your comments! The feedback was wonderful; I’ve implemented all of your suggestions.

From a broader perspective, were there any areas that should be cut? Added? I was a little concerned that I may have made everything overly complicated or repetitive.”
ink tutorials

task assignment keeps tutorial experts available

hosting and sharing to bootstrap traffic

feedback and reviews help verify credibility
Systems that give workers agency to define and manage tasks have lower friction in use.

- the challenge of friction
- ink
- deployment
embedding tasks within paths users already travel
experts created tutorials
method

online deployment for a year, Nov 2015-2016
two question survey:
• review your experience
• have you ever hired someone online before?

interviews with 16 users (Nov 2016) and 3 experts

combination of qualitative data from interviews and surveys and quantitative web log data
field experiment

discovery vs. other causes of friction
randomly assigned:
• ink tutorial embedded tasks
• “If you need more help after reading this tutorial you can hire an expert here: [link to Upwork]”.

measure number of task requests
usage from Nov 2015-Nov 2016

168 users paid an average of $20.30 (s.d.=16.70) for 190 tasks

115 responded to our follow-up survey
4.74 out of 5 (s.d.=0.43) average rating
usage from Nov 2015-Nov 2016

<table>
<thead>
<tr>
<th></th>
<th>Write a statement of purpose for graduate school applications</th>
<th>Create your academic curriculum vitae</th>
<th>Edit your paper before submission</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pageviews</strong></td>
<td>8,000</td>
<td>509</td>
<td>714</td>
</tr>
<tr>
<td><strong>Tasks completed</strong></td>
<td>150</td>
<td>34</td>
<td>6</td>
</tr>
<tr>
<td><strong>Time on page</strong></td>
<td>4:57</td>
<td>2:26</td>
<td>2:24</td>
</tr>
<tr>
<td><strong>Main medium</strong></td>
<td>Organic search (57.7%)</td>
<td>Direct (50.6%)</td>
<td>Direct (39.5%)</td>
</tr>
</tbody>
</table>
Ink reduces friction both the information barrier and cost for hiring an expert.

negotiating a hiring contract vs. submitting a request.
“The website was very nice and has very good content. It gives clear directions on how I could submit my SoP.

It was really helpful [. . . ]. It was not difficult to determine steps that were to be followed. I simply went through the page and sent an email with my details.”
11 out of 16 participants mentioned the low cost and ease of use as the main reasons.

“It wasn’t very expensive, I was just taking a chance […] I didn’t think that I had a need until I saw this and I thought I should try it”

Ink supports users to find low cost, context specific connections to experts who can help them.
A specific, context dependent need brought users to Ink.

people seek information in a narrow, context specific information space related to their need at that moment.
“I was looking to write a statement of purpose and I just typed in [a search engine...] I was really just looking for examples maybe of other people’s and it was maybe the 3rd or 4th hit, so I clicked on it and I was like oh look, there’s a service that lets you submit your draft and get it reviewed and it thought me what to write so that’s what got me into it”
Ink users would likely not have otherwise accessed expert crowd help.

4/16 interviewees had hired previously
14 of 69 Ink users who responded to our post survey had previously sought paid expert help online.
field experiment results

Over a month:
• 32 requests in ink condition
• 1 request in the control condition.

\[ \chi^2(1, N = 33) = 29.1, \rho < 0.05 \]
Workers reported that defining their own tasks granted them greater feelings of control.
“I really like the idea of creating the tasks myself. It gives me a sense of control over the work that I would be potentially doing in the future. [. . .On Upwork] you might not know exactly what your work will look like, depending on your client’s wishes along the way. What sounds like a simple task might become endlessly complicated, or the client might want something from you that they didn’t put into the job ad. With your style of work, it’s almost like the roles are reversed.”
Systems that give workers agency to define and manage tasks have lower friction in use.

- the challenge of friction
- ink
- deployment
<table>
<thead>
<tr>
<th>Table I. The design space of hiring surfaces for crowd work. Ink’s choices are highlighted.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Task Creation</strong></td>
</tr>
<tr>
<td><strong>Task Situation</strong></td>
</tr>
<tr>
<td><strong>Task Type</strong></td>
</tr>
</tbody>
</table>