
Empowerment and teaching L^AT_EX

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Abstract

This talk addresses the question of how empowerment (and lack thereof) influences teaching and learning L^AT_EX, on the example of creating collaborative solutions between Humanities scholars and L^AT_EX consultants. It recounts the backstory behind the personas of Noob and Ninja. It teaches four lessons on empowerment in teaching L^AT_EX:

1. Empowerment is much more than providing motivation
2. Being welcoming
3. Focusing on teaching the basics extremely well
4. Empowering new users to find their own solutions

The backstory

After an unsuccessful attempt at typesetting a master’s thesis in L^AT_EX in 2013, it took four more years until Astrid’s L^AT_EX story finally started. As a Humanities scholar and archaeologist, there wasn’t a lot of online support geared towards her needs. Nor were people willing to help her because, most likely, they were prejudiced against her for coming from the Humanities and not a technical field. Her encounters didn’t go well. They tended to be aggressive or degrading in some way, both on the internet and in real life. This is why, in 2018 when the L^AT_EX Ninja blog launched, we soon partnered up as Noob and Ninja to post this story of rejection.¹ The blog post was welcomed very warmly by the (L^A)T_EX community and a first article about it appeared in *TUGboat* in 2019.²

In our talk at TUG 2020, we explained typical typesetting needs of Humanities scholars using the example of an archaeological catalogue, which essentially requires setting up an environment which features non-floating images, tabular data and a description which can be a longer text. These catalogues are not exactly standardized, they can be very different from one individual to another and thus, of course, there are many possible L^AT_EX implementations for them. However, the typesetting solution chosen is not the point of this paper. Here, we want to draw more general conclusions about what can be learned from this scenario about empowerment in teaching L^AT_EX.

One part of this empowerment is to transform the term “newbie” or “noob” which is very often used in a negative way into a positive idea of a beginner of L^AT_EX (or any other technical area one might start

as a Humanities student or scholar). The Ninja and the Noob stand for this positive way of using the term “noob” and we go back to the very meaning of the word itself: a beginner. And all (L^A)T_EX users were beginners once.

Lesson No. 1: Empowerment is much more than providing motivation

In fact, it’s mostly about eliminating or reducing sources of potential demotivation. After all, motivation doesn’t last but demotivation does, so we want to avoid it like the plague. It also doesn’t mean that we need to “entertain” new users. They can take on a challenge. They don’t require a circus of fun tutorials. They just require tutorials which don’t confuse them more than they help. They might need to be taught how to create a minimal working example to ask questions effectively on StackExchange. It might not be immediately obvious for them how the lipsum text seemingly appeared from nothing. They might need the pre-tutorial tutorial. You need completely different didactic approaches for teaching newbies than for other users.³

Lesson No. 2: Being welcoming⁴

Don’t be imposing. Don’t expect newbies to follow you like a hero. Empower them to create their own solutions but also don’t stop talking to them because they decided to go for an implementation which you recommended they shouldn’t use. The goal is to keep them using L^AT_EX. As long as they continue using it, they will get better. Only a user who stops using L^AT_EX is a “bad user”. Failures are part of the learning process. Indeed, there can’t be any learning without mistakes made. (This is also a reason why we need to teach coping with error messages, including psychologically!)⁵

But part of being welcoming also means to write that follow-up email if you said you would. About summing up recommendations given in oral form again in writing — because it’s so easy to get lost with just one single typo or misunderstanding. Part of being welcoming could also be giving a newbie good keywords for a web search — after all, their search engine is probably not trained to spit out great L^AT_EX resources like yours probably is. Give suggestions on how to best find good search results, which terms or packages to look for rather than patronizing new users for “not looking up the problem on their own”. Maybe they did. Maybe the problem is ridiculously easy in your eyes. If they didn’t find a solution even though you think a quick web search yields tons of good results, don’t assume they didn’t look. Maybe they did but didn’t find anything because

they didn't know how to formulate the problem (just as they might not know how to "correctly" formulate a problem for posting the question on a forum).

All this requires previous knowledge, and abstraction isn't easy, just because it comes naturally to you as an experienced user. Maybe they found a solution but didn't understand it or they didn't realize a search hit was relevant to them (or how it could be relevant to them). Also, don't bother with useless reprimands instead of answering the question. You are not in the newbie's shoes so it is not your place to judge them. Make sure to be welcoming instead.

Lesson No. 3: Focusing on teaching the basics extremely well

When teaching people from the Humanities, the first obstacle is the very different idea they have for why to use \LaTeX and what to use it for. The Humanities are a complex gathering of fields with their own methods and research questions. Therefore, their interests in using \LaTeX include a lot of possible requests.

Because of the problems and barriers the noob experienced, we decided to choose the production of an archaeological catalogue as a project to start with.⁶ Knowing the basic outline for the needs of the Noob, the Ninja could start working and thinking about it. Every Humanities problem demands another field of basics — some are fairly similar to other research questions and requests for the use of \LaTeX , while others are unique. So the basics you have to teach depend on the specific needs of your Humanities noob. Focusing on teaching is thus focusing on individual needs and on talking about the individual needs and concerns.

But it also means you don't need complicated solutions. Just make sure people get the basics right. Often this consists of a process of extreme simplification after the first brainstorming phase. Then you need to patiently and persistently reinforce the concepts.

Lesson No. 4: Empowering new users to find their own solutions

This can mean teaching which packages might be relevant for them because there is a whole flood of possibilities out there on CTAN.⁷ As mentioned above, suggesting to new users which search terms typed into a search engine are likely to yield the desired

results: Often, newbies cannot search for their own problems effectively because firstly, they're using much less targeted or relevant keywords, and secondly, the engine doesn't remember all sorts of useful online \LaTeX resources for them, like yours probably does.

Finding your own solutions for a newbie means finding imperfect solutions and that's ok. Learning how to write one's own first command or environment is an important milestone on the path to \LaTeX empowerment. This also relates to hammering the basics home. Small successes are essential for empowerment. And understanding the basics well is the best way of scoring small wins to be able to move forward.

Notes

¹ Astrid Schmölder, Guest Post, Confessions of a LaTeX Noob, in The LaTeX Ninja Blog, 26 February 2019, latex-ninja.com/2019/02/26/guest-post-confessions-of-a-latex-noob

² Sarah Lang and Astrid Schmölder, "Noob to Ninja: The challenge of taking beginners' needs into account when teaching \LaTeX ", *TUGboat* 40:1, 2019, pp. 5–9, <https://tug.org/TUGboat/tb40-1/tb124lang-newbie.pdf>.

³ For more detail on the didactics, see Sarah Lang's article in this issue, "Didactical reduction versus references", pp. 173–175.

⁴ Discussed in detail in the "Noob to Ninja" *TUGboat* article cited above.

⁵ See for example the posts "Learning to program: What to do if the program doesn't compile", latex-ninja.com/2020/01/12/learning-to-program-what-to-do-if-the-program-doesnt-compile, and "Learning to program: Failing fast and error messages", latex-ninja.com/2020/05/31/learning-to-program-failing-fast-and-error-messages.

⁶ We won't go into detail here, but in this post are some of the insights we learned from the experience: latex-ninja.com/2020/05/04/latex-for-archaeologists-an-archaeological-catalogue-using-latex.

⁷ During the conference, a discussion started on whether it would be possible to filter packages by utility.

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