

In this IP, I will form a personal concept of usability as understood after reading chapter two of Issa and Isaías (2015) and build a concept of educational usability in light of its absence from traditional usability conceptions. I will review examples of Woolgar's (2015) "usability gone wrong" to explore their flaws when assessing usability. Finally, I will compare positions on usability from both Issa and Isaías (2015) and Woolgar (1990).

Issa and Isaías' (2015) chapter two presents usability as a measurable attribute of human computer interaction (HCI) that focuses on efficiency, effectiveness, and ease of use (p. 32). My understanding of usability focuses on *intuitive interaction* - when a system behaves in a way that feels expected, either because it mirrors something we've done before or because it naturally guides us toward what we're trying to do. This is similar to Issa and Isaías' (2015) inclusion of learnability and memorability as principles supporting usability (p. 33) and their reference to interacting with computers intuitively (p. 25). It is important to think about how well a system responds to our interactions and whether it aligns with our instincts. If I learn the right steps but still keep tripping up, it doesn't feel intuitive. This is also similar to the usability principle of "error" (Issa and Isaías, 2015). For an interaction to be intuitive, designers need to think about what users already know and what their ultimate goal is when using the system. A measurement of usability through intuitiveness must be grounded in how seamlessly a system communicates its logic to new users. From my perspective, good usability is not just about reducing friction with the system, rather it's about embedding the teaching within the design itself. A usable system will anticipate the user's logic, align with the user's intuition, and then gradually extend their capabilities. We are going to start interacting with technology we have never even imagined before, and without evolving our concepts of usability we risk limiting the adoption and evolution of the technologies themselves.

Educational usability presents a challenge of designing for users (students) who not only differ from one another, but who must simultaneously learn to use, and learn through, a system. I proposed a concept of usability grounded in intuitive interaction, but this framing is also inadequate when applied to educational tools. Educational usability is not just about ease of interactions and their errors, but how meaningful those interactions are and how they support purposeful learning. Another key focus in a conception of educational usability lies in the tension between teacher goals and student goals. Educational technology will serve multiple stakeholders, often with conflicting priorities, and with that comes this ambiguity where usability is about a user succeeding on their own terms. Woolgar's (1990) idea of configuring a user through design contrasts with my conception of educational usability which I believe requires a "negotiated configuration" where the user behaviour and purpose can also influence a tool's affordances. Building on that, I propose that educational usability principles should encourage non-standard interactions within its systems. Just as educators like myself encourage learners of all ages to tinker, experiment, and explore, our technologies should reflect those same values. Forgiveness and adaptability are therefore central principles in my conception of usable educational technology.

Two examples from Woolgar (1990) underscore flaws in assessing usability. First, before the trials, Woolgar (1990) acknowledges the difficulty of knowing the user from within the company, particularly when he was rejected after volunteering his services as tester (p. 70). This points to the larger issue that the user was already configured by the company to be someone who had no knowledge of the product already. A second example is from during the trials, where testers frequently interacted with the subjects. Woolgar (1990) points out that a variety of the tester comments seemed to be aimed at whether the subject was acting like a 'real user'. For example, one tester interjection was quoted as, "Just do it as if you were doing it normally" (p. 86). Rather than learning from a diverse pattern of use, the interruptions by testers reinforced a narrow model of a user. Overall, these two examples speak to the uselessness of the usability trials as they were undermined by preconceived notions of a user which left little room for any real learning or insight.

Finally, I am sharing a figure that compares Issa and Isaías (2015) presenting usability as loops of feedback and iteration, while Woolgar (1990) demonstrates how usability trials and design can configure and even limit the user identity.

Figure 1.

Concept	Issa and Isaías (2015)	Woolgar (1990)
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Assumptions about the User	The user is an important part of HCI (p. 25)	Woolgar finds that users are defined and predetermined (p. 69-70)
Design Goal	The role of HCI is, “to match the needs and requirements of the users” (p. 25)	To maintain control by narrowing the idea of who a user is (p. 69)
Role of Testing	Testing is iterative and instrumental to design (p. 25)	Woolgar finds testing to be somewhat performative (p. 70)
Relevance Today	Generally applicable usability principles	Foundational critique of user and usability testing

References:

- Issa, T., & Isaias, P. (2015) Usability and human computer interaction (HCI). In Sustainable Design (pp. 19-35). Springer.
- Woolgar, S. (1990). Configuring the user: The case of usability trials. *The Sociological Review*, 38(1, Suppl.), S58-S99.