Shneiderman's 8 Golden Rules of Interface Design

- Consistency is key.
- Shortcuts for pros.
- Good Feedback, fast.
- Prevent errors: design so mistakes dont happen. Delete > conformation popups > prevents screwing up
- Easy to reverse actions: people mess up. make it easy to undo
- User in control
- Minimal Memory Load
- Efficient & Aesthetic

Jakob Nielsen's 10 Usability Heuristics

- Visibility of System Status: Keep users in loop. Loading? Show progress; Processing? show spinner
- Match Between System & Real World: ditch tech jargon; Speak Human
- User Control & freedom: give escape routes. undo, redo, back buttons
- Consistency & Standards : Don't Reinvent UI Patterns.
- Error Prevention: Bet way to fix errors is to simply not let them happen
- Recognition Over Recall
- Flexibility & Effeciency
- Aesthetic & Minimal Design
- Help users Recocnize, Diagnose & Recover from Errors
- Help & Documentation

Shneiderman & Nielsen's Usability Rules 🖖

Aesthetic & Minimalism

- Shneiderman: Efficient & Aesthetic Keep it clean, simple, and functional.
- Nielsen: Aesthetic & Minimalist Design No clutter, every element should serve a purpose.

User Control & Freedom

- Shneiderman: User in Control Let users decide what they want to do, don't force them.
- Nielsen: User Control & Freedom Undo, redo, and exit options should always be there.

Easy Recovery & Error Handling

- Shneiderman: Easy to Reverse Actions Undo should be an option at all times.
- Nielsen: Help Users Recognize, Diagnose, & Recover from Errors Clear error messages, easy fixes.

Error Prevention

- Shneiderman: Prevent Errors Like a Pro Design in a way that avoids mistakes.
- Nielsen: Error Prevention Best way to fix errors? Make sure they never happen.

Reduce Cognitive Load

- Shneiderman: Minimal Memory Load Users shouldn't have to remember things, UI should guide them.
- Nielsen: Recognition Over Recall Show options instead of making users remember.

Speed & Efficiency

- Shneiderman: Shortcuts for Pros Power users need hotkeys and efficiency hacks.
- Nielsen: Flexibility & Efficiency Adapt for both newbies and pros (shortcuts, automation).

Clear Feedback & System Status

- Shneiderman: Good Feedback, Fast Users should see instant responses to their actions.
- Nielsen: Visibility of System Status Keep users informed with progress indicators, load spinners, etc.

Consistency

- Shneiderman: Consistency is Key UI elements should be predictable and follow standard conventions.
- Nielsen: Consistency & Standards Don't make users guess, follow existing design patterns.

Unique to Each

Shneiderman Only

N/A (Everything maps to Nielsen's rules)

Nielsen Only

- Match Between System & Real World Speak human, not machine. Use familiar icons & language.
- Help & Documentation If users need help, make it easy to find (searchable docs, FAQs, tooltips).

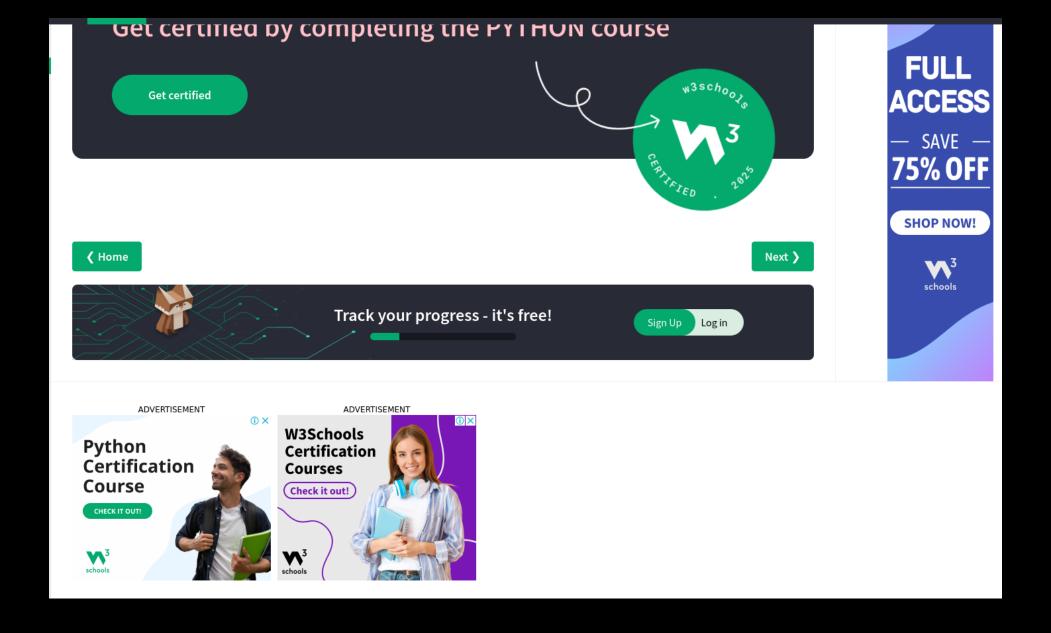
Usability Review of Learning Websites

W3Schools

Good:

- Visibility of System Status Instant feedback on button clicks, live code editor shows changes immediately.
- Recognition Over Recall Code examples are visible no need to memorize syntax?
- User Control & Freedom The "Try it Yourself" editor allows unlimited experimentation.
- Minimal Memory Load Step-by-step explanations and examples for concepts.

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Bad:

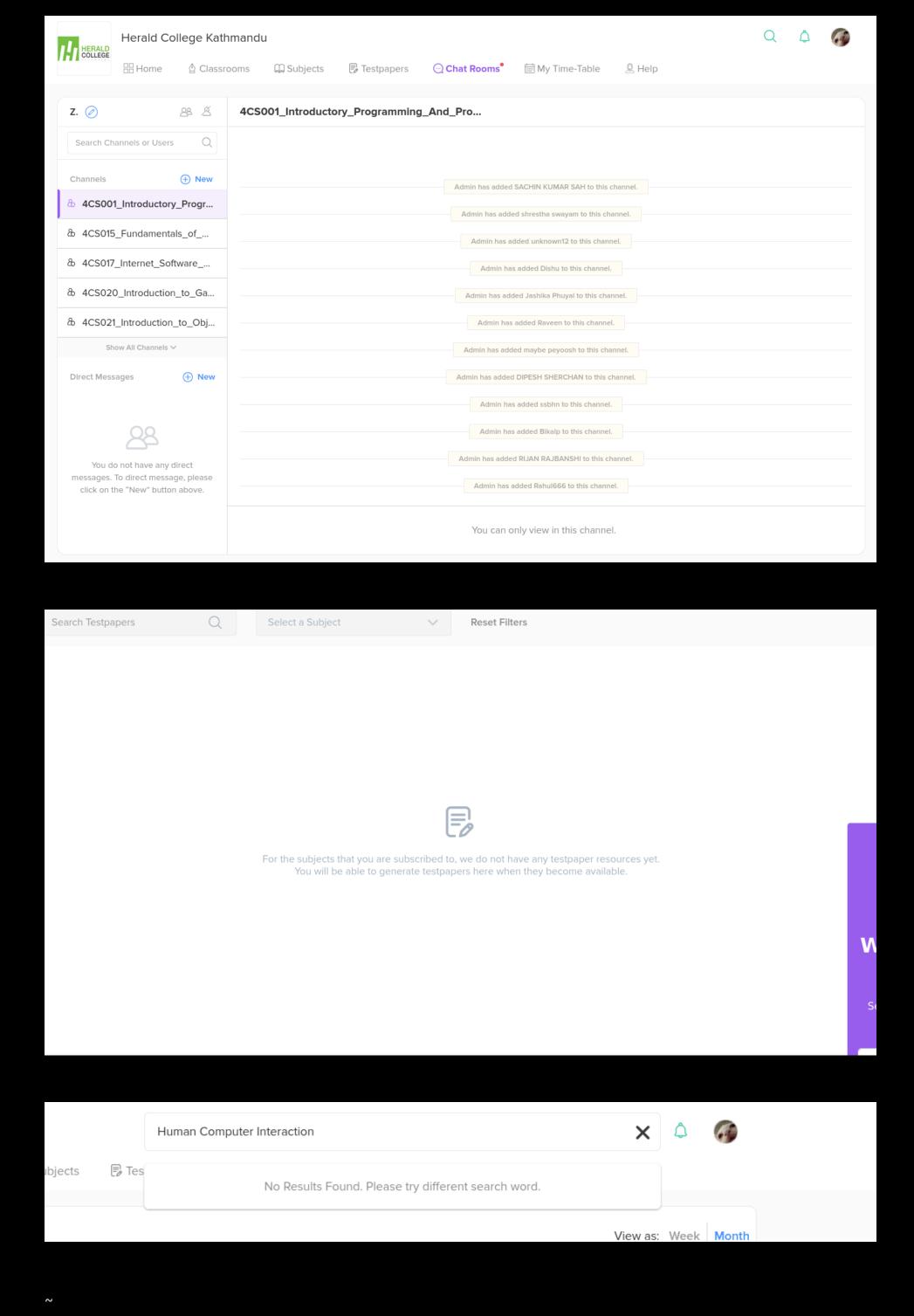
- Aesthetic & Minimalist Design The site is functional, but visually outdated and cluttered.
- Flexibility & Efficiency No real shortcuts or advanced tools for power users.
- Error Prevention The live editor doesn't warn about common mistakes; users just see errors.

MST

Good:

- User Control & Freedom They Have over 4000 interactive videos; user can pick; pause, rewind, playback
- Good Feedback, Fast Interactive quizzes give instant results and diagnostics.
- Match Between System & Real World The platform uses straightforward language and familiar educational structures, ensuring content is relatable and easy to understand.

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- Shortcuts for Pros No real way to speed up navigation or customize the learning experience.
 - Search Doesn't Work
- Error Prevention Some questions don't guide users on how to fix mistakes.
- Aesthetic & Minimalist Design The site is functional, but visually outdated and cluttered. Random Notifications.
 - Unusable sections