Programming is fun!

A survey of the STEAM digital distribution platform

SE-GAMES - November 2020

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@jarnedom
After a hard work day...
After a hard work day......mmmm
The “Programming games” genre

“Games in which the player writes short programs that control agents within a game.” (Wolf, 2001)

Niche, but its popularity has increased in recent years (data from Steam)

Published in 2020
A survey on “programming games”

Research Questions

● What are the main properties of “programming games” from a design standpoint?

● How many are REALLY about programming?

“the process of preparing an instructional program for a device" (Merriam-Webster)”

● Which computer programming learning outcome concepts could be considered to be covered in each game?
A survey on “programming games”

Methodology

● Study based on the Steam digital store using its API via steamDB.

● Games only (no DLC, apps, etc.) with the “Programming” tag.

● Assessment based on 2 hour long gameplay (or til the end!)

● Coding curriculum categories based on:

Word cloud of “programming games” tags
Categorization

Coding interface

- Direct control
- Command line
  - No automation

- Processors
- State graph
  - No “code”

- Action blocks
- Code blocks
- Text code
But, can you really learn programming?

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**Main value:** Algorithmic design, problem-solving skills
Future (and present) work

- The study should be updated (about 70 new games).
- They should be tested with student (now undergoing pilot - HRM).
- “MVPs”: Zachatronics and Tomorrow Corporation.
- Something interesting for educators: Zachademics.

More detailed information (full analysis by game) in the original paper.
Thanks!