

# Zebrafish Development Time-Lapse Video - Holding Time

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August 2002

THIS IS NOT A DEFINITIVE FINAL REPORT

FORMATIVE evaluation studies like this one often:

- **are conducted quickly**, which may mean
  - small sample sizes
  - expedited analyses
  - brief reports
  
- **look at an earlier version** of the exhibit/program, which may mean
  - a focus on problems and solutions, rather than successes
  - a change in form or title of the final exhibit/program

# Imaging Station - Formative Evaluation Zebrafish Development Time-Lapse Video - Holding Time

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## PURPOSE

- To determine how long visitors stay to watch the time-lapse video of Zebrafish development
- To determine if visitors stay to watch the entire video
- To determine if there is any difference in holding time between the annotated and the non-annotated version of the video

These findings can be used to inform the design of future time-lapse videos.

## METHOD

- The time-lapse video was displayed with accompanying text on the computer monitor. See Figure-1.
- The time-lapse video played in a continuous loop. Visitors could NOT control the playback in any way.
- A video camera and microphones were set up around the monitor to collect data for later analysis
- An evaluator swapped between the annotated and the non-annotated version of the video every 1/2 hour
- Data were collected on 2 Wednesdays:

Date	Day	Time	
		Non-Annotated	Annotated
8/7/02	Wednesday	12:30 – 1:00	1:00 – 1:30
		1:35 – 2:35	2:05 – 2:35
		2:40 – 3:10	3:10 – 3:40
8/14/02	Wednesday	12:45 – 1:15	1:15 – 1:45
		1:50 – 2:10	2:10 – 2:50
		2:55 – 3:35	3:35 – 3:55

Figure-1. Screenshot of time-lapse video shown.



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### What is a zebrafish?

A zebrafish is a type of tropical fish that you can find in most pet stores. In this movie you see a zebrafish embryo. This means that it has not hatched yet. It has to change from 1 cell to a baby fish.

When a zebrafish does hatch and grows up, it'll look like this:



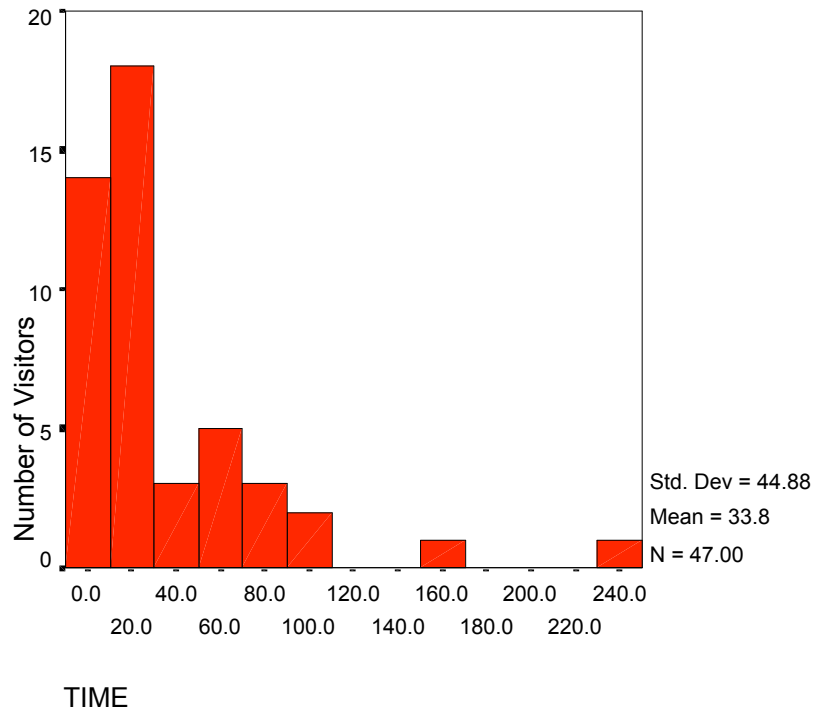
### Where did we get this movie?

We took this movie with our new, high-tech microscope at **THE MICROSCOPE IMAGING STATION**. In the future, you'll have a chance to play with this microscope, yourself.

My Computer

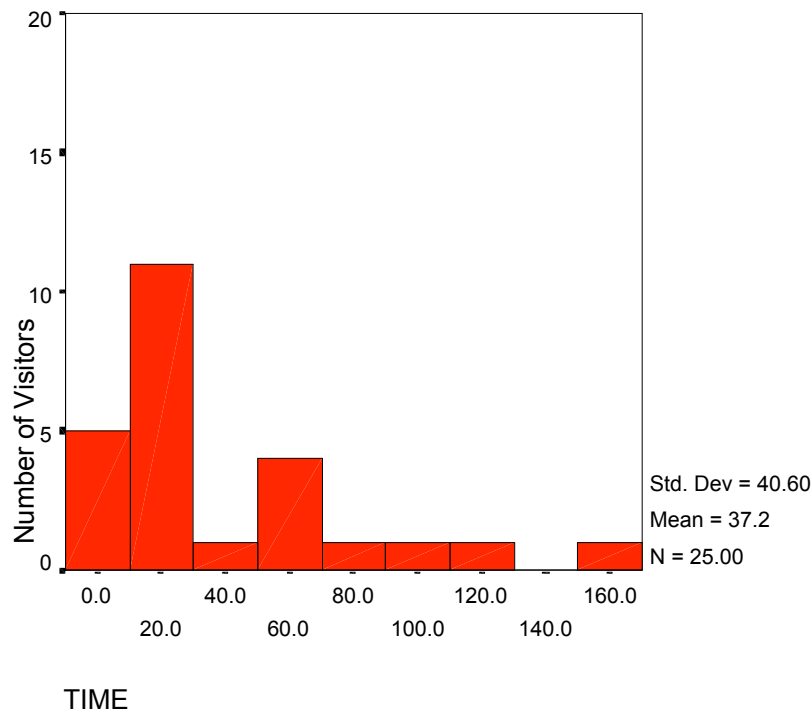
## RESULTS

### Annotated Video



- On average, visitors watched the video for 34 seconds
- 50% of the visitors stopped and watched for more than 15 seconds
- 3 out of 47 visitors (6%) stayed beyond 1 complete loop (100 seconds) of the video
- Percentiles
  - 80% Stayed beyond 7 seconds
  - 60% Stayed beyond 11 seconds
  - 40% Stayed beyond 17 seconds
  - 20% Stayed beyond 62 seconds
  - 0% Stayed beyond 239 seconds

## Non-Annotated Video



- On average, visitors watched the non-annotated video for 37 seconds.
- 50% of the visitors stopped and watched for more than 16 seconds
- 2 out of 25 visitors (8%) stayed beyond 1 complete loop (100 seconds) of the video
- Percentiles
  - 80% Stayed beyond 9 seconds
  - 60% Stayed beyond 14 seconds
  - 40% Stayed beyond 26 seconds
  - 20% Stayed beyond 66 seconds
  - 0% Stayed beyond 165 seconds

## Differences between the Annotated and Non-Annotated Video

- There was **no significant difference** between the amount of time visitors watched the annotated version (N = 47) and the non-annotated version (N=25),  $t(70)=.476$ ,  $p>.05$ . (The t-test was performed on ln transformed data; a Kolmogorov-Smirnov test indicated no significant difference between the ln transformed data distribution and a normal distribution.)

## SUMMARY OF RESULTS

- On average, visitors stayed to watch the video for 35 seconds.
- Less than 10% of the visitors stayed to watch the entire video.
- There was no significant difference in holding time between the annotated and the non-annotated version of the video

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