Do Teens Know How to Use Physical Media?

Abstract

I’ve always had a love for music. Physical media only amplified that love. Being able to hold an album that I love in my hand for the first time was amazing. I remember buying two CDs at a Barnes and Noble, Flower Boy and IGOR by Tyler, The Creator. The sensations of having a piece of art I love in its physical form was wonderful, but it made me wonder something. Physical media is outdated, there's no doubt about it. Streaming is dominating the music industry, and it makes sense, it’s the logical next step for music, and because of this, not many teens know how to use physical media. This isn’t a problem, but it made me wonder, how many teens are there that still know how to use physical media? In my experiment, I had some of my classmates take their best shot at using a record player, a cassette player, and a CD player. The majority of people did not know how to use any, but proficiency occurred mostly in the CD player, with 33.33% of people knowing how to use it, he vinyl player came in second place with 22.2% of people knowing how to use it, and the cassette player came in dead last with 11% of people knowing how to use it. Overall, the industry has progressed without physical media, and that's fine. Time goes on and technology advances, that's just the way of life.

Question and Hypothesis

Question: Do teens know how to use physical media?

Hypothesis: The majority of teens will not know how to use physical media when tested.

Background Research

In my opinion, physical media is more important now than ever. In digital form, nothing is permanent. Anything can be taken away at any second, this can be due to record label disputes, time specific content, licensing issues, etc. After that, unless another streaming service still has that piece of content, it's just gone. The thing about physical media is, it’s permanent. Here's an example, an artist gets dropped by their record label, their work is no longer on streaming, and it seems like the end, but if you still have their catalogue on CD or vinyl or cassette, it can’t just go away. The CD won’t just stop playing, and if you take good care of it, it might not ever stop playing in your lifetime, this is why it’s important to keep physical media alive.

Initially, vinyls were the most popular form of music listening. This makes sense considering the fact that it was one of the only forms of music listening up until this point. They were about ten dollars (about sixty to eighty dollars today), which is not cheap. (Umphred, 2025) Eventually the cassette overtook them in 1983, this was due to the fact that they were much more affordable to make and buy, much easier to carry around, much more durable, and you could play them in your car. (Perry, 2022) They were the most popular and made up about fifty to sixty percent of sales up until 1991, when the CD overtook them. (Perry, 2022)

Background Research

The 90s were a boom for the music industry that was never seen before. The CD was the most popular and accessible form of music listening up until this point, and it dominated the market, making up seventy to ninety percent of music sales. (Perry, 2022) The CD was extremely easy to carry, and they could easily be played in your car. Not to mention the fact that some extremely popular bands and artists were in their prime during this time, including Korn, The Notorious B.I.G., and many other notable artists. The only problem is, with this profit, the music industry became increasingly corrupt. The artists had little control over their work and how it was marketed, that was left up to their record label, and these record labels were typically willing to do whatever they could in order to make more money. (Park, 2025) CDs weren't cheap either, they cost fifteen to twenty dollars, which is about thirty to forty dollars today. (Park, 2025) Record labels didn't care though, they were making billions of dollars a year regardless of the outward protest to CDs. Many bands such as Nirvana publicly voiced their grievances with the music industry. Eventually, people got tired of paying, and a revolution happened.

One of the earliest examples of a streaming service being Napster, they had tons of downloads of music available on their website for completely free. The only difference being, the way it was being done was completely illegal. Absolutely no money was being sent to record labels or artists, as no money was being made from Napster, because everything was completely free.

Background Research

First they sued Napster, then they started suing the people who were downloading MP3s from Napster. That random guy in Utah with six thousand MP3s on his computer? Six hundred thousand dollars fine. (Park, 2025) This made not only artists hate record labels, but people too. The music industry attempted to cooperate, and Apple released the iPod in 2001. The iPod had all of Napsters bells and whistles, with downloadable music all on one device, the only thing was that it wasn't free. You had to buy songs individually for a price averaging about ninety nine cents (about two dollars today) per song. That adds up, for example, in order to buy the entirety of The Beatles discography, you had to pay about two hundred and thirteen dollars (three hundred and eighty six dollars today). (Park, 2025) Because of this steep price, a certain band had an idea.

Radiohead, a band known for bending the rock genre by incorporating electronic elements into their music, at the peak of their fame in 2007, released their entire album *In Rainbows* online. Not only did they release it online, they let their fans pay whatever price they wanted for the album, meaning that they could pay ten dollars for it, or get it for completely free. (Park, 2025) This shocked the music industry, a completely free digital release of an album was not before heard of. A notable decline in CD sales happened, and record labels were panicking. The frontman of the band, Thom Yorke, said that the reason they did it was because of the corrupt middle men of the music industry, who had close to complete control of their artists albums and the condition they were released in.

Background Research

Releasing their album for completely free was a risky move, but it worked. On the top of the website, there was text that read “It’s up to you”, meaning that the success of this album was put in the hands of their fans, and the price they were willing to pay for it. This established trust between them and their fans. The album was a hit, and it made Radiohead more popular than ever. Eventually, Nine Inch Nails started releasing albums online for free as well, making them extremely popular. Then there was Chance The Rapper, who released all of his music on soundcloud, and proceeded to win a Grammy. The music industry was losing money, and needed a way to retaliate.

Spotify was free, in theory. You could access all of the music you wanted for free, but unless you had a subscription, you had to listen to ads. (Park, 2025) Hypothetically, the artist, the streaming service, and the record label all make money, and you get access to the music for free. Sounds good, right? The thing is, the corporate greed was still there, except this time, it lied with the streaming service. Recent studies show that smaller artists make around fifteen dollars a month if they get a couple thousand streams per month, while the large majority of that money goes to the companies. Streaming now has a monopoly over the music industry, and the majority of people only listen to music on streaming services, and physical media is basically out of the picture nowadays. Artists still make vinyls, CDs, and occasionally cassettes of their music, but it certainly is not as popular as it once was.

Background Research

Radiohead was certainly a big contributor to the downfall of physical media, however, for the state of the music industry at the time, the release of their album online was well intentioned. With all of this, one question remains.

Do people still know how to use physical media? With the rapid decline of CD sales in a shift to streaming, I find it extremely likely that most people will not know how to use a CD player, cassette player, or vinyl player. Although some people may not already know how, it is likely that some tests with the CD player will go well, because many of the CD players have very intuitive designs, and people might just figure out how to use them. Even with all of this, my hypothesis is that the majority of people I test will not know how to use physical media.

Materials

- CD player
- Cassette player
- Vinyl player
- A cassette, CD, and vinyl
- Clipboard, pen, paper
- A stopwatch

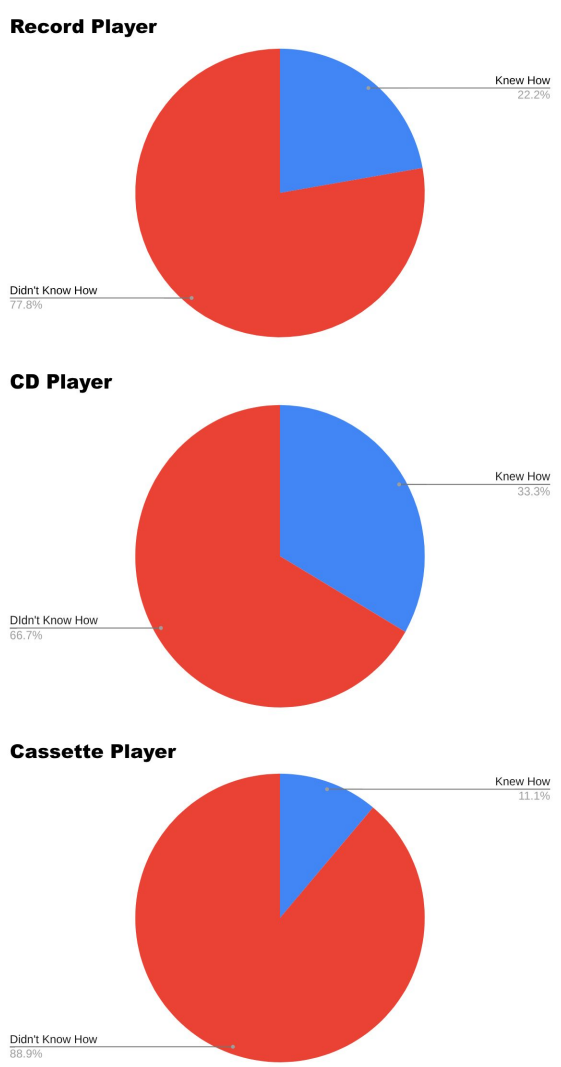
Procedure

- A person will go into a room with a cassette player, a cd player, and a vinyl player.
- First, they will sit down in a chair in front of the cd player, and be asked to put the CD in the CD player and play it from the beginning.
- Their time and proficiency will be recorded on your paper.
- They will move on to a cassette player, and be asked once again to play the cassette from the beginning.
- Their time and proficiency will be recorded on your paper.
- They will move on to the vinyl player, and be asked to play the album once again.
- Their time and proficiency will be recorded on your paper.
- Repeat the experiment as many times as you can with the amount of resources and volunteers.

Results/Data

These results show that my hypothesis was correct. The great majority of people I tested did not know how to use physical media, with the lowest amount knowing how to use a cassette player. This makes sense because the cassette didn't dominate the market for very long, and is the least popular form of physical media today. The average times show low proficiency in the usage of physical media, as most of the time I've found that I can do it in less than a minute.

Avg. Vinyl Time	1:53
Avg. CD Time	1:39
Avg. Cassette Time	2:14



Conclusion

My results showed that the great majority of teens do not know how to use physical media. This proved my hypothesis to be correct. The highest proficiency was in CD players, and the lowest was in cassette players, this makes sense because CDs and their players designs are highly intuitive and easy to figure out. If I were to redo this experiment I would make the dates more set in stone, and I would have a better structure to it so it could be done the same more consistently. A next step might be to look at different age groups.

Sources

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