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Investigating the impact of financial literacy on an individual's success in managing personal finances in the long run

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Abstract
The paper aims to establish the impact of the stage when an individual is introduced to financial literacy on theirfinancial prosperity in the long run. I conducted a survey to understand this relationship between financial literacy and financial management, which yielded about 100 responses. The survey was designed to collect data ranging from the participant's education levels to his understanding and application of personal financial management. To support the analysis, previously published financial literacy papers were used to inform the survey forms and parameters used in this paper. Analysing and evaluating my data, I concluded that when you were introduced to financial literacy did not significantly influence financial prosperity. But, a regular and continued interaction with financial literacy is critical whenever you do get introduced to financial literacy. This, coupled with an early engagement with the subject, could prove potentially financially lucrative in the long term.

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I. Background Information

The pandemic highlighted the stark inequality divide between the poor and the rich. The rich were seemingly immune to the ravishings of the pandemic as any drop in their primary incomes was replenished by the steep rise in valuations across the global financial markets. Their wealth grew against the backdrop of economic conditions unanimously termed "once in a century." This stood in contrast to the poor, whose fortunes fared much more like the state of the economy. As economies globally were being dragged through the drenches by COVID-19, the poor saw their modest earnings experience the same fate. Then this year, Oxfam furnished an unflattering portrait of the state of inequality in Indiawhich was soon followed by the Securities and Exchange Board of India publishing a report that concluded that only 27% of Indians were financially literate.

This divide, in my belief, existed partly due to the lack of or access to financial literacy. The rich educated at elite institutions knew the intricacies of the financial markets, and in case they did not, their money afforded them access to those who did. The poor having access to neither option, couldn't shield themselves from the economic pains of calamities like COVID-19 since their apparentlack of knowledge and access provided them with little to no understanding of personal financial management. For them, any money earned is as good as spent due to the lack of buffers that create savings and inter-generational wealth in the long run.

The impact of financial literacy on any individual's saving, spending, and borrowing behaviour is profound. Financial literacy dictates an entire economy's health as it is nothing but the sum of its households. This was especially evident during the 2008 financial crisis, where the lack of financial literacy created an opportunity for financial institutions to promote ill-intentioned subprime mortgages without ever being questioned.Therefore, as India progresses in economic development, financial literacy is increasingly critical in policy designing and research agendas. This would help reduce inequality and promote a healthier, more robust economy primed for growth.

II. Aim And Approach

Money and financial products are a vital part of the present world. People should be able to utilise and leverage themeffectively.Recognising the very evident lack of financial literacy in the Indian educational curriculum in high schools and its debilitating role in propagating inequality in the future, I am investigating the effects of financial literacy on an individual'senduring financial management success.

From the outset, I hypothesised that financial literacy from a young age creates long-term financial success. This was based on the belief that the earlier the introduction to financial literacy, the greater the understanding of an individual, which could help effectively practice the three pillars of financial literacy: maximising savings, prudently spending, and creating diversified investment portfolios.

Establishing a correlation between financial literacy and financial success is not plausible due to the wide gamut of variables and uncertainties involved. Recognising these difficulties, I have developed a method of analysis that aims to reduce these uncertainties by focusing on three simple variables: when did you first learn financial literacy, have you invested in the long term, and do you spend more than you save. These three variables are not the most concrete determinants, but they constitute the core tenets of financial literacy- knowledge and application. These factors were analysed with variables like the respondent's income and the stage at which they first came across financial literacy, which is also the primary aim of this research paper.

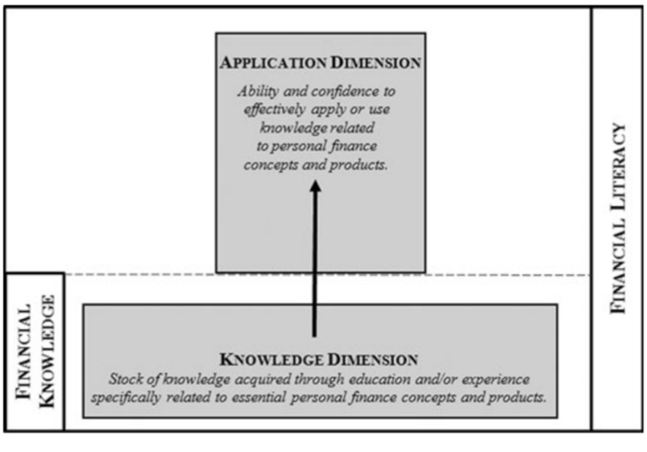
To establish this relationship, I designed a survey form shared with participants of varied ages, occupations, and racial profiles. I chose to survey because that was what was available and most convenient to me. About 100 respondents filled out the survey form. Respondents had to answer ten questions, which were divided into two parts: financial literacy testing and personal. The form introduced questions related to the research paper over the form's first half, and the latter half was reserved for personal details. Iopted to follow this structure to reduce the bias with which people filled their forms, as often the responses are more accurate when the personal questions aren't asked first. The survey form can be accessed at this link.

The form's emphasis on financial prosperity and financial literacy led me to define them for clarity and precision.

2.1 Financial Prosperity
According to Legatum Institute 1, financial prosperity is underpinned by a sense of security. Security that even if you lost your job, you would have enough to sustain yourself until you landed another job. Security that you had enough to decide to do something fulfilling, meaningful, and purposeful in life that is not entirely driven by economic motives. I am cognizant that financial prosperity has a vast subjective description to many, but still, I believe that security is one factor that ties all the disparate definitions together.

2.2 Financial Literacy
Financial literacy requires an individual to have the appropriate financial knowledge with the ability and confidence to use their financial knowledge to make financial decisions.

FIGURE 1
Concept of Financial Literacy



As shown in Figure 1, the idea behind the survey was to understand the application skills of the respondents rather than their financial knowledge. Knowing something and putting it into practice are inherently different concepts- the difference between which can determine long-term financial success. Therefore, to understand the scope of financial literacy, I posed the following questions about investing and savings.

- What, according to you, is financial literacy?
- Generally, at any given time, do you spend more than you save by using credit facilities like credit cards? (Barring the months where large expenditures were undertaken for events like emergencies or weddings)

- Do you find it hard to manage your personal debt? (Personal debt can be your credit card debt, EMIs, home loans etc.)
- Have you invested any money?

These questions allowed me to distinguish the percentage of people who understood the concept of financial literacy and did not just believe that savings are financial literacy.

Similarly, my other questions gave me perspective on a person's basic financial profile. Complete access to records and data about the respondent's income and knowledge was not possible for various factors like trust and bias. Therefore, my questions avoid being direct and personal to prevent getting a biased and untrue response from the respondent.

III. Data Collection And Results

To collect responses to my survey, I cast a wide net of family members, friends, relatives, teachers, and their contacts. This vast network of people ensured that I did not restrict myself to a specific group of people and had a diverse set of respondents.

I used Google Forms to collect my responses as it had an easy-to-use and universally accepted interface, which most respondents were familiar with. Moreover, Google Forms allowed me to utilise technological tools to analyse my data.

Due to the sheer size of the data collected, I am only attaching a screenshot of the sample below. The complete dataset can be accessed at this link.

	A	B	C	D	E	F
1	Timestamp	When did you first come across financial literacy?	What according to you is financial literacy?	Generally, at any	Do you find it hard to mana	Have you invested any money?
2	7/12/2022 17:15:21	High School (9th Grade to 12th Grade)	It is the knowledge required to manage risk and grc	No	No	Yes, I invest myself
3	7/12/2022 17:17:17	Work	It is the art of saving as much money as possible a	No	No	Yes, I invest myself
4	7/12/2022 17:30:19	Work	It is the knowledge required to manage risk and grc	No	No	Yes, I invest myself
5	7/13/2022 13:16:17	High School (9th Grade to 12th Grade)	It is the knowledge required to manage risk and grc	No	No	Yes, I invest myself
6	7/13/2022 22:54:34	High School (9th Grade to 12th Grade)	It is the knowledge required to manage risk and grc	Yes	No	Yes, I invest myself
7	7/14/2022 13:44:40	College/ University	It is the knowledge required to manage risk and grc	No	No	Yes, I invest myself
8	7/14/2022 13:46:30	Do not know much about it	I am not sure	Yes	Yes	No, I have not invested
9	7/14/2022 13:50:09	No Knowledge	I am not sure	No	No	No, I have not invested
10	7/14/2022 14:25:24	Work	It is the knowledge required to manage risk and grc	Yes	No	Yes, I invest through an advisor or mar
11	7/14/2022 21:25:50	College/ University	It is the confidence of knowing how much to save a	No	No	Yes, I invest through an advisor or mar
12	7/15/2022 7:21:07	Work	It is the confidence of knowing how much to save a	No	No	Yes, I invest myself
13	7/16/2022 18:47:21	College/ University	It is the art of saving as much money as possible a	No	Yes	No, I have not invested
14	7/16/2022 19:10:14	College/ University	It is the confidence of knowing how much to save a	No	No	Yes, I invest myself
15	7/16/2022 19:12:21	Work	It is the knowledge required to manage risk and grc	No	No	Invest in myself through me only
16	7/16/2022 19:13:55	Work	It is the knowledge required to manage risk and grc	No	No	Yes, I invest myself
17	7/16/2022 19:16:00	Work	It is the knowledge required to manage risk and grc	No	No	Yes, I invest through an advisor or mar
18	7/16/2022 19:25:10	College/ University	It is the knowledge required to manage risk and grc	No	No	Yes, I invest myself
19	7/16/2022 19:25:19	Work	It is the knowledge required to manage risk and grc	Yes	No	Yes, I invest myself
20	7/16/2022 19:37:02	Work	It is the confidence of knowing how much to save a	No	No	Yes, I invest myself
21	7/16/2022 19:39:03	Work	It is the confidence of knowing how much to save a	No	No	Yes, I invest myself
22	7/16/2022 20:02:31	High School (9th Grade to 12th Grade)	It is the knowledge required to manage risk and grc	No	No	No, I have not invested
23	7/16/2022 20:26:57	High School (9th Grade to 12th Grade)	It is the confidence of knowing how much to save a	Yes	No	Yes, I invest myself
24	7/16/2022 20:27:07	Work	It is the knowledge required to manage risk and grc	No	No	Yes, I invest through an advisor or mar
25	7/16/2022 20:28:57	Work	It is the knowledge required to manage risk and grc	Yes	Maybe	Yes, I invest myself
26	7/16/2022 20:54:42	College/ University	It is the knowledge required to manage risk and grc	No	No	Yes, I invest myself

IV. Analysis And Evaluation

To explore my hypothesis, I decided to create correlation patterns between the following factors:

1. The stage when introduced to financial literacy correlated to spending and saving patterns
2. The stage when introduced to financial literacy correlated to investing patterns
3. Income of the respondent correlated to his spending and saving patterns

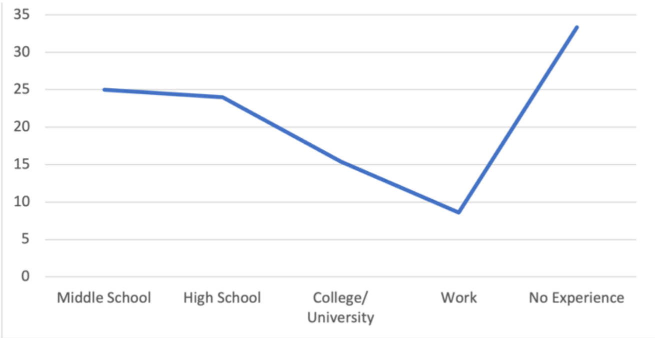
I deliberately chose the above because I could investigate the impact of financial literacy from a young age on financial prosperity using these. I decided on variables like spending and saving patterns based on the core tenets of financial literacy. This, again, was designed in favour of the hypothesis and its variations.

1. Spending and Saving Patterns VS Introduction to Financial Literacy

Since the basic premise of financial literacy is saving more than spending, I decided to correlate this variable with the stage when the respondent first came across financial literacy. The table below shows the responses to the question, "generally, at any given time, do you spend more than you save by using credit facilities like credit cards? (Barring the months where large expenditures were undertaken for events like emergencies or weddings)." A *yes* to the question signifies poor financial management, albeit rudimentarily, due to the small sample size of only about 100 people.

The table and graph below summarise the results of this correlation.

	Y	Total	Percentage
Middle School	2	8	25
High School	6	25	24
College/ University	4	26	15.4
Work	3	35	8.6
No Experience	1	3	33.3



As can be seen, the trend is an inversion of my hypothesis. The respondents who came across financial literacy later in life reported a lower percentage of the *yes*response. The No Experience category is an anomaly due to the significantly small sample size, which is why I have not evaluated it any further.

Though unsupportive of my hypothesis, the inverted trend isn't without its merits. Learning about a complex subject like financial literacy during higher education or work stages might prove more beneficial than a middle school education due to our increased ability to absorb the subject's intricacies. Moreover, financial literacy at a middle-school level might prove redundant as students could not either practice this art or remember it for many long years until they started working. Also, the availability of earnings opportunities during higher education or work might provide an apt platform to practice skills learnt in financial literacy. This could enable greater absorption, retention, and practice of the core tenets of financial literacy. Lastly, we cannot discount that the small sample size of middle school respondents might restrict our ability to draw any correlation or causation relationships from this data set.

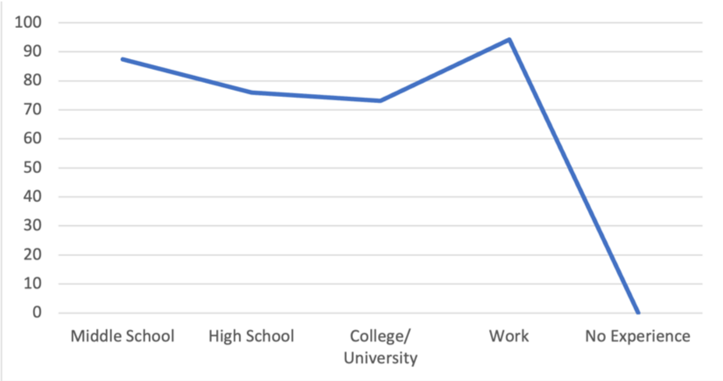
Therefore, from this correlation pattern, we can only glean that the time we are introduced to financial literacy might not be as important as I had initially projected.

2. Introduction to Financial Literacy VS Investing

The second core tenet of financial literacy is creating a diversified investment portfolio. This is especially important as it helps safeguard our hard-earned money against inflation, provides us with a secondary income source, and increases our wealth. Therefore, to investigate my primary hypothesis, I started by correlating the stage whenthe respondent first came across financial literacy with their investment journey. The table below reflects the responses to the question, "Have you invested any money?"

The table and graph below summarise the results of this correlation.

	Y	Total	Percentage
Middle School	7	8	87.5
High School	19	25	76
College/ University	19	26	73.07692308
Work	33	35	94.28571429
No Experience	0	3	0



Almost everybody who came across financial literacy in middle school has invested. This is a very positive correlation as it substantiates my initial hypothesis and helps us understand that a middle school introduction does help ignite a spark, no matter how small. This correlation helps us understand how financial literacy plays a role in ensuring people invest and grow their assets. Despite the differing values, almost everybody with some form or other of financial literacy has invested during their lifetime. In comparison, the people with no experience have not invested at all. While the sample size doesn't allow us to make definite inferences, we can safely predict that financial literacy is vital in helping individuals invest their hard-earned cash across financial assets, whether through a financial advisor/ manager or themselves.

Spending and Saving Patterns VS Income
The second variable I correlated to the spending and saving patterns was the income bracket of the respondent. This is essential as it helps us understand how money affects financial literacy skills.

The results are summarised in the table and graph below:

	Yes	Total	Percentage
Lower than 10 lakhs	4	14	28.6
10-25 Lakhs	5	26	19.2
25-50 Lakhs	1	20	5.0
50 L to 1 Cr	4	21	19.0
Higher than 1Cr	4	12	33.3

Now, this is the most interesting graph. In one image, we can see a parallel being drawn between the richest and the poorest. Both the richest and poorest tend to exhibit the worst application of financial literacy. While for the poorest, it is understandable that financial constraints are a driving factor behind poor financial choices, what is not as straightforward as the most affluent exhibit the same traits. They have access to many resources and do not share the same financial constraints. The only plausible reason is that those who make a lot don't worry about it and spend more than they should. It's the middle-class families that have shown financial prudence. It could be a product of both financial constraints and aspirations for more incredible wealth and stability in the future. Still, the middle class has been very planted in their financial planning.

V. Conclusion

While my correlation patterns have not outrightly supported my hypothesis, I have still gained some valuable insights from them. The most foundational construct about financial literacy impacting long-term financial prosperity has also been established through my data. While, yes, there have been instances of respondents not practising financial literacy despite knowing it, most have benefited in one way or the other from this knowledge. Experts also generally agree that financial literacy appears to be directly correlated with prosperous financial behaviour(Hilgert, Hogarth, & Beverly, 2003). While this has been a well-established construct, the paradox arises when we discuss the implication of financial education on long-term and short-term financial success from a young age.

This paper had been designed with the aim of long-term success, and my data has not been able to respond to that conclusively. Despite that, the data collected has shown that financial literacy from a young age can be positive, just like financial literacy at a later stage in life. There is no evidence to support that educating at a younger age than a later one will yield better financial results. But what is certain is that regular interactions with financial literacy programs are necessary irrespective of when you get introduced to them. Only through regular exchanges can one aim to master the art of financial literacy, as it requires time, patience, and practice.

In conclusion, despite failing to prove my hypothesis, my data helps establish that,

- Financial literacy influences long-term prosperity
- Lack of financial literacy can lead to poor financial behaviour
- When one is introduced to financial literacy is not as crucial as the application of these skills

Recognising the vital importance of financial literacy, I believe it is essentialfor governments worldwide to endeavour to promote financial literacy as it has an outsized influence on the health of a country's economy. A financially illiterate population can cause havoc on an economy's stability, prosperity, and growth. Therefore, to prevent a market failure and to protect the national interests, governments should look towards the following proposals:

1. Promote financial literacy programs, especially in rural areas. One of the biggest causes of wealth inequality is the lack of or access to the correct, pertinent financial knowledge. Becoming financially literate can, if not make someone bright, help equip them with knowledge enough to know when to seek help managing finances or reduce debt exposure. These programs could be created with the private sector as they could provide invaluable guidance and support- financial and otherwise. Moreover, the government could provide certification for these programs. Certifying the program in partnership with the private sector would enable the program to become a tool for people with or without opportunities to progress in their career and income-earning opportunities.
2. Introducing financial literacy as a compulsory vocational skills class in national educational curriculums. High school students are either already engaging in economic activities or are on the verge of doing so. Therefore, teaching them financial literacy every week would have an outsized impact on the long-term financial health of the students.
3. The government could provide course credits for online financial literacy programs. Most Indian students enroll in domestic educational boards like the CBSE. Therefore, credit provisioning programs by the government would promote financial literacy amongst a larger student body.This would encourage many to participate in these programs without incurringenormous expenses for the government. Also, accrediting online programs like these could help people gain better-paying jobs.

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