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Technical Writing Assignment:
Documenting Solutions*

Memorandum

TO: Stephen Lecce, Minister of Education of Ontario
FROM: Omid Moaddab, York University student
DATE: November 13, 2019
SUBJECT: Recommendation Report: Increasing financial literacy of
Ontario students

Introduction:

This report is a follow up on the previous report which described the problem of lack of financial literacy among students and the implications it has for the government of Ontario and Ontario citizens. The intended audience of this report is the Minister of Education of Ontario but can be used by anyone interested in financial literacy. By writing this recommendation report, I hope my suggested solutions are considered for improving the financial literacy of Ontario students and improving their quality of life in the process. After introducing the background on the problem, this report lists requirements for possible solutions, introduces the suggested solutions(options), makes a point by point comparison of the options, summarises the results, concludes the result and makes a final recommendation.

Background on the Situation:

As discussed in the previous report (problem description and research), Canadians owe billions of dollars, which includes student loans, credit cards, payday loans, healthcare, etc. These debts not only put the citizens' lives at risk but also impose a significant weight on government's budget, which has to be spent on Social welfare systems, student debts, fraud protection, etc. (Lusardi, 2019, p. 6). I also mentioned that one of the most important reasons that this problem exists is that individuals do not have the required knowledge and mindset to manage their finances (which is referred to financial literacy). So by increasing financial literacy the government can save millions of dollars while helping its citizens. Considering that very little is done in this area, this report suggests new ways of solving this problem.

Requirements and Criteria:

"The ineffectiveness of financial literacy education has been attributed to several factors, regardless of learners' ages. Non-cognitive factors, many of which cannot be controlled by teachers (including self-confidence, maturity, socio-economic characteristics, and parents), have the greatest impact on outcomes. Research also points to the need for financial education to be

age appropriate, inclusive and immediately relevant to students' lives." (Pinto, 2017). In addition to these factors, the solution has to be cost-effective for the ministry.

Let's explain each of them:

Relevance: According to most researchers, financial literacy has to be immediately relevant to be effective (Taylor & Wagland, 2013). For example, "learning about stocks is retained and applied when that learning occurs at the time a person invests, not before" (Pinto, 2017). Similarly, if such activities are consistent with what students experience in their home lives, "young children can engage in simulated stores to practise performing basic transactions linked to math curriculum, while mid-elementary students might benefit from field trips to banks to open accounts." (Pinto, 2017).

Age-Appropriateness: "The main concern about contemporary programs is whether much of the material available to teachers is developmentally and age-appropriate for K–12 students. This mismatch may be the main cause of failings, especially in elementary schools." (Pinto, 2017). Therefore, paying extra attention to each person's age when designing the solution is one of the most critical requirements.

Inclusiveness: "Inclusive education – not limited to financial literacy education – has the advantage of drawing students into learning. When a lesson contradicts students' identities and lived experiences, those students are more likely to be disengaged." (Pinto, 2017).

Cost: The less the solution costs, the better it is.

To construct a weighted objectives table later, we give each requirement a weight based on priority. The higher the weight is, the higher the priority becomes:

Inclusiveness: 5 (since the most essential factor is how many students it can reach),

Age-Appropriateness: 4,

Relevance: 4,

Cost: 3 (Cost has a lower priority compared to other factors since, over the long run a lot more money is saved by implementing a solution to financial literacy).

Proposed Solutions:

1- Creating a financial literacy education mobile game: This game includes different difficulty levels. Each stage focuses on a specific finance topic, and players level up by progressing through the story. It also consists of an online mode where players can take on different roles (shopkeeper, buyer, etc.) and have to manage their finances. After a particular time, the player with the most money wins

2- Couching program with personalized contents: This program will gather students with similar backgrounds (socio-economical, cultural, etc.) and age together and provides customized content specific to each group. For example, elementary school students go to tours to financial students

while adolescent students learn to invest in the stock market. Aids are provided for each student to help them through the program. For example, to groups from low-income families, a small budget is given to practice budgeting (Lalaya, Huxley, & Atkinson, 2019).

3- Including a mandatory financial literacy instruction course: At every grade level, beginning in kindergarten adds a course to each year of K12 to include content relevant to each age.

Comparisons of solutions:

In this section, each solution is tested against the requirements and is given a score based on how well it performs in that area. The higher the score, the higher the performance.

Relevance: The first solution (financial literacy game) includes different levels with different content for each level. This combined with the online mode makes it a very relevant and engaging solution. The coaching program personalizes each program by asking students about the activities they do right now, getting parents input on the most appropriate financial concepts to their families. Though these can be done in the traditional classroom to some extent, the coaching program wins this category since there are fewer students to support and the prepackaged study material can be customized further.

Thus the scores are: Solution1= 10, Solution2= 15, Solution3= 5.

Age-Appropriateness: The most age-appropriate solutions are solutions 2 and 3. The coaching solution and the mandatory financial literacy instruction course solution can provide education material for each age. Solution1 is harder to implement for all age groups since tastes in video games vary with age. Thus, the scores are: Solution1= 10, Solution2= 15, Solution3= 15.

Inclusiveness: Since every student has to school, mandatory financial education course (solution 3) has the most inclusiveness score among the options. However, because the coaching program is an extracurricular program, some students may not attend it. Similarly, not every student has access to smartphone, and thus solution 1 has less inclusiveness. Hence the results: Solution1= 10, Solution2= 10, Solution3= 15

Cost: This cost involves research of the contents, training of the staff(including teachers and coaches) and implementation. “There are casual, AAA level and MMO games. And their prices will be significantly different. For example, Flappy Birds game development can cost \$0–500, and GTA 5 costs \$265 mln.” (Yury, 2019). Since a simple educational game is desired, the cost of making it is not very high. We can compare its analogy with Angry Birds and consider it costing 50k-100k CAD. There is no training cost involved. Introducing a new course for each education level will require a lot of collaboration and research but is still less than the cost of personalized coaching programs. Thus the scores become: Solution1=15, Solution2= 10, Solution3=15.

Summary table: Now I summarize the conclusions from the comparison section using weighted objectives tables.

Requirements		Solution 1 (financial literacy education mobile game)		Solution 2 (Coaching program with personalized contents)		Solution 3 (Including a mandatory financial literacy instruction course)	
Comparison Criteria	Weight	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score
Relevance	4	10	$4 \times 10 = 40$	15	60	5	20
Age-Appropriateness	4	10	$4 \times 10 = 40$	15	60	15	60
Inclusiveness	5	10	$5 \times 10 = 50$	10	50	15	75
Cost	3	15	$3 \times 15 = 45$	10	30	15	45
		Total=175		Total=200		Total=200	

Conclusions: The following is a summary of the comparisons of different methods of increasing financial literacy:

1. In terms of relevance, the coaching program is the best, followed closely by the game app idea
2. In terms of age-appropriateness, Both the coaching program and the mandatory financial literacy course score the same and better than the gaming idea.
3. In terms of relevance, the coaching program and the game app score the best.
4. The coaching program is the most expensive idea.
5. Although the coaching program is costly, it has the highest mean (i.e. it scores high in almost all areas).
6. Even though the game idea has the lowest overall score, it is the most cost-effective option, which only includes an initial investment (unlike the other two solutions which have require recurring spending).
7. The mandatory financial literacy course idea scores very high on age-appropriateness, inclusiveness, and cost, but since it is taught in the traditional school system, is the weakest in the relevance criteria compared to other two options.
8. The coaching program and the mandatory financial literacy course both score 200. This means overall; there is a tie between these solutions and the winner solution is both of them.
9. The best option for increasing financial literacy is to implement both solutions 2 and 3. That is, to include a mandatory financial literacy instruction course at every grade level and to hold a coaching program with personalized content across Ontario.

Recommendation: Based on criteria relevance, age-appropriateness, inclusiveness and cost, I ranked the suggested solutions. The coaching program (solution 2) will mostly focus on relevance and personalizing the contents for the students based on their current life situations while the mandatory financial course (solution 1) ensures inclusiveness so that the highest number of students from all backgrounds have access to financial literacy education. Thus, it is recommended to implement both of these solutions. Moreover, given the importance of financial education, if there was adequate budget left, it is recommended to implement a financial mobile game app (solution 3) or to reward the developer who comes up with the most innovative one.

Sincerely,
Omid Moaddab

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