

[The way forward to improving employee benefit engagement](#)

## Failure to launch: Why financial education is failing and what we can do about it

South Africa | 01 June 2014 | Insight

Authors and contributors



[Anne Cabot-Alletzhauer](#)



[Matthew Ryder](#)

### Examining the challenges

Each year the number of credit-active consumers continues to rise. By the end of 2013 it was at an all-time high of 20.3 million<sup>1</sup>. This is huge if you take into consideration that there are only about 14 million South Africans who are employed. And of that number, only 11 million work in the formal sector<sup>2</sup>. On top of that, 9.8 million people –almost half of the credit-active population – have impaired credit records<sup>3</sup>.

At the 2012 Midrand Debt Summit, statistics were shown suggesting there are approximately 3 million garnishee orders in circulation against between 10% and 15% of all employees<sup>4</sup>. Worse, where consumers have been unable to tap into established financial service providers for credit, they have been turning to unregistered ones, like loan-sharks, in spite of the sky-high interest rates they charge.

**Studies show that interventions to improve financial literacy have a mere 0.1% effect on financial behaviour**

**FINANCIAL EDUCATION AND COMMUNICATION**

Kelsy Moodley | Actuarial Analyst

ALEXANDERFORBES  
Securing your financial well-being

**If financial education is supposed to be the antidote to the increasing complexity of financial decision making, we are losing the war and at a horrible cost.**

This debt syndrome is clearly one of the factors that undermine the best intentions of National Treasury to build a viable savings culture in South Africa. As such, we all have a huge incentive to find a way to cope with the problem. Policymakers, regulators, boards of trustees, unions, financial services companies, and members all agree: there's a critical need for greater financial literacy if South Africans are to make meaningful decisions about their financial welfare. The recent increased interest in this topic means there's an abundance of financial learning material, literature and on-line education programmes. These are targeted at adults, college students, high school students and even pre-schoolers, with more projects ready to hit the marketplace in just about every country where there's a concerned financial regulator. But has this wealth of materials really made a practical difference in people's lives?

A recently released (February 2014) report, *Financial Literacy, Financial Education and Downstream Financial Behaviours*<sup>5</sup>, provides an analysis of the relationship between programmes promoting financial literacy and their success at improving financial behaviour. The results are disheartening. A dissection of 168 papers covering 201 prior studies shows that interventions to improve financial literacy explain a mere 0.1% of the variance in financial behaviours. Worse, those studies that target low-income groups showed even weaker results.

If *“financial education is supposed to be the antidote to the increasing complexity of financial decision-making, we are losing the war and at a horrible cost”*<sup>6</sup>. The estimated yearly cost of these programmes globally is in the billions of dollars. And governments, employers and service providers throw more money at the problem every day – without the army of financial literacy or member education specialists pausing to understand why they don't see any quantifiable results.



## Insights

In our own analysis of the South African situation, three insights provide important keys to unlocking the problem:

- 1 Who facilitates the access or delivery and how? This is a key factor in getting people to respond positively and permanently.
- 2 By focusing on what we need to teach people to develop a reasonable level of financial literacy, these programmes tend to neglect the more critical question: how do we get people to pragmatically act in their own best financial interests? In effect, we haven't properly addressed the 'why' – why people should bother.
- 3 None of this is meaningful unless we can continuously monitor and measure these efforts to determine which strategies work.

### Who can meet this challenge?

Before the shift from defined benefit (DB) to defined contribution (DC) schemes, employers played steward to their employees' benefits packages. But in our current DC environment, where the individual bears all the risks of poor outcomes, financial literacy plays a central role in shaping success. In the end, it's most often the poor choices members make that sink their chances for meaningful outcomes than the disappointing performance of any asset manager or even costs.

Employers would seem to be a natural conduit for facilitating a stable financial journey for their employees. Remuneration passes through their hands and garnishee orders are typically processed at this payroll point. That means employers should have a natural self-interest in their employees' financial wellness. There is growing evidence that financial stress leads to absenteeism, presenteeism, lack of focus or capacity for effective decision making and even fraud or criminal activities. It would seem unwise from a human resources management perspective not to take an interest in your employees' financial wellness.

But, getting the employer to re-engage in the problem is not trivial. And it's not necessarily because employers don't value their employees' welfare. Historically, employers have found the results from their efforts to promote employee financial wellness to be disappointing – if not downright disheartening.

Some of the reasons why financial wellness programmes have not been as successful as hoped include:

- > Typically, those employees who need financial wellness programmes the most, are the ones too embarrassed or disengaged to participate<sup>7</sup>.
- > It's almost impossible to accommodate the wide range of literacy levels and needs with one financial wellness programme. This problem is made worse by the fact that people are often at different stages of receptiveness to change and the changes required may be different for different individuals.
- > Knowing whether the programmes and services provided actually translate into better decisions or less stress for employees is the true test of the merit of any programme, but companies rarely test this and rather assume that it works.

If we can't change the model, or at least the conversation, then many employers will simply not see what value these additional services offer. Getting the employer back to the table will require that we help them identify whether there is a financial stress problem in their company, who is affected' how prepared are they to address the problem and, most importantly, does solving these problems improve the bottom line for their business?

## Getting to the heart (or mind) of the problem

By focusing on what people need to know, we tend to ignore the more critical question: how do we get people to do something about the problem, to act in their best financial interests? Financial knowledge is of little value if an individual is not inclined or even able to apply it.

While the textbooks tend to promote a myth of self-determining individuals who are capable of shaping their own behaviour independent of peers<sup>8</sup>, the reality is that our financial behaviours are powerfully shaped by the actions and beliefs of family and friends.

There is more to changing these ingrained social practices than simply providing education and access to financial instruments<sup>9</sup>. As economist and Nobel laureate, George Akerlof, points out: “Individuals’ decisions are driven not only by idiosyncratic tastes, but also by internalised social norms<sup>10</sup>.” The implicit desire for conformity, acceptability and social identity can powerfully affect decision-making. In financial decision making<sup>11</sup>, social context and emotions matter. It is far from a rational process.

So, how do we catalogue these feelings, how do we chart an individual’s inclination to take financial action, and how do we establish their readiness to tackle their financial futures head on? What’s needed are some metrics to evaluate and monitor these psychological factors in new ways not ordinarily considered by financial education material. The strategy outlined in the following section shows an action plan that any employer can put in place from beginning to end.

## Strategy

### What employers can do

#### Step 1 : Measuring an individual’s level of financial distress

Measuring an individual’s level of financial distress turns out to be a particularly effective (and fairly simple) way for employers to determine whether financial distress in their companies could turn into a productivity issue<sup>13</sup>. Prawitz et al<sup>14</sup> determined that they only needed eight simple, but rigorously tested, questions to establish the level of stress an individual employee might be experiencing as a result of financial difficulties. With the Personal Financial Wellness Scale, it’s fairly easy to take the financial distress pulse of the full contingent of employees at any company.

**The questions that gradually emerged as most effective over the long term were roughly along these lines:**

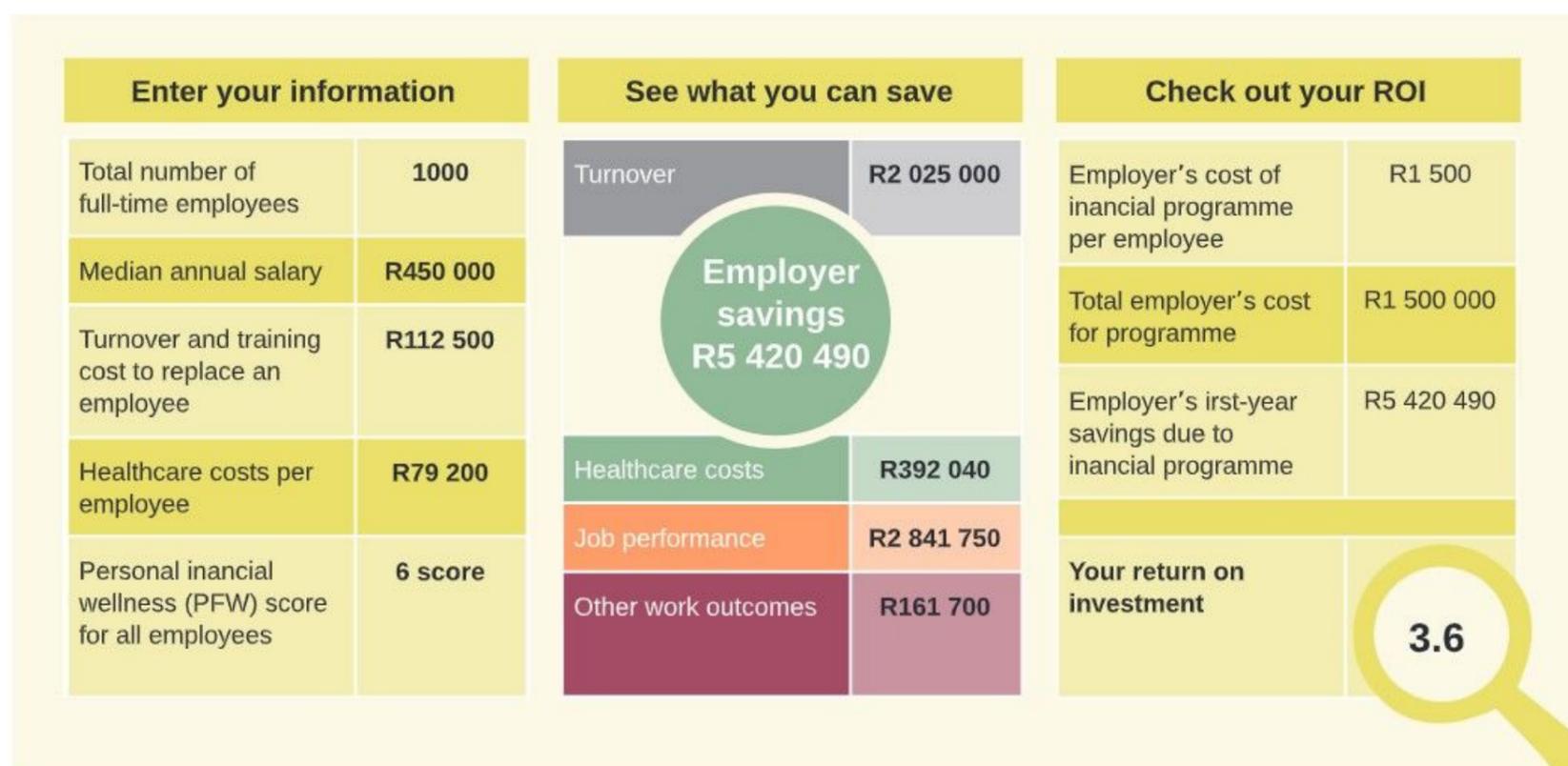
- 1 What, do you feel, is the level of your financial distress today?
- 2 On a scale of 1 to 5, mark how satisfied you are with your present financial situation.
- 3 How do you feel about your current financial situation? (This differs from question 2 by considering how overwhelmed or confident the respondent is rather than how satisfied they are.)
- 4 How often do you worry about being able to meet your normal monthly living expenses?
- 5 How confident are you that you could find money to pay for a financial emergency that costs about \$1 000?
- 6 How often does this happen to you? You want to go out to eat, go to a movie or do something else and don’t because you can’t afford it.
- 7 How often do you find yourself just getting by financially and living from paycheck to paycheck?
- 8 How stressed do you feel about your finances in general?

**TAKING MEASURE A 25-year-old study by a cross-disciplinary group of American academics ultimately came to the realisation that understanding how individuals felt about their financial situation provided far better insights into how we could best produce behavioural changes.**

#### Step 2: Having a measure of financial distress

Having a measure of financial distress that can be applied across the company, irrespective of income or job level, not only helps employers know when they need to bring in help, but provides them with a benchmark by which they can ultimately measure whether the interventions they introduce yield results that may justify the expenditure. And providing corporates with a tangible measure of return on investment (ROI) into a financial education programme helps justify the costs involved. This tool was designed by the Personal Finance Employee Education Programme. It calculates how much employee financial distress costs and estimates the employer’s return on investment for providing workers with quality workplace financial education.

## Employer projected ROI for quality financial programme



Source: Adapted from the Personal Finance Employee Education Foundation

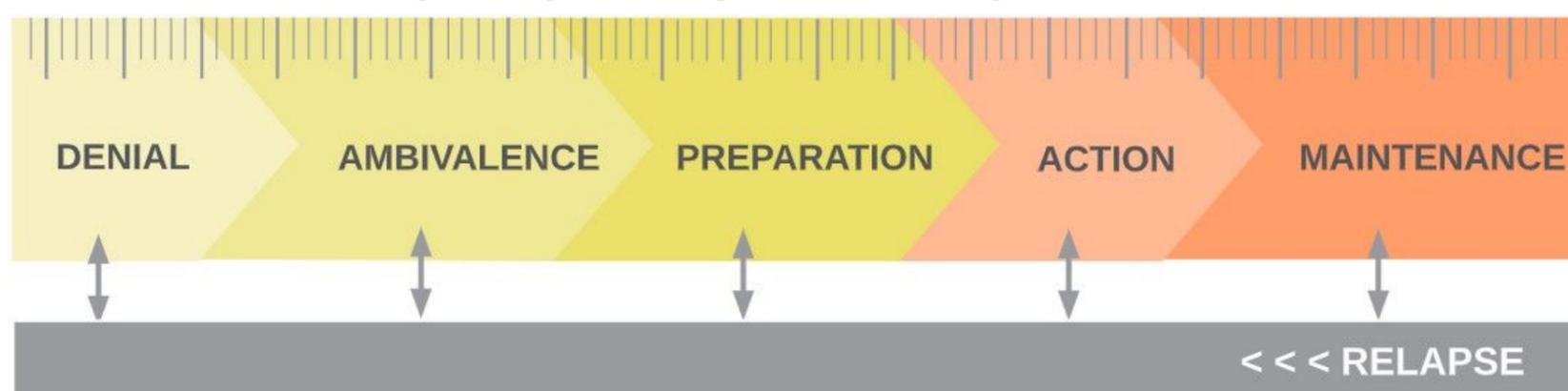
### Step 3: Measuring preparedness for change

Testing for financial distress only addresses half the problem. A 2007 study by researchers at the Personal Finance Employee Education Foundation<sup>15</sup> found that: “even though employees are experiencing stress related to such financial topics as retirement planning, debt management and budgeting, about half are unwilling to learn more about these stressful topics in order to change their situations.” Clearly, before employers waste money on educational programmes that won't be effective, it's crucial to establish how receptive employees would be to these programmes and shape strategy to suit individual needs.

Measuring preparedness for change This challenge led the research to some interesting work done on behavioural change in areas of addiction. These studies identified six distinctive stages of preparedness in individuals that were invaluable for identifying not only how predisposed they might be to changing self-destructive behaviour, but more importantly, what kinds of interventions were most effective for individuals at each of these six stages. The financial coaching fraternity quickly accepted and adapted this model<sup>16</sup>.

The table on the next two pages represents a hybrid of ideas and inputs on implementing this model. Our base is a template developed by Grubman, Bollerud & Holland as a Center for Financial Security working paper<sup>17</sup>. We have drawn from our own array of solutions to provide inputs as to what concepts might be most effective for which stage.

### The readiness ruler showing the stages of change in over spending



Stage of readiness	General description	Relevance to the individual	What they may be responsive to Carrot (fun - C) and stick (scare - S)
<b>1. Denial</b> "Ignorance is bliss." <i>Pre-contemplation</i>	Person has not yet considered the possibility of change because of lack of awareness of the problems or failure to see a need for change.	Individual does not recognise the long-term self-destructive implications of depleting principal, high credit card debt, inadequate savings, and failure to follow a financial plan.	<ul style="list-style-type: none"> <li>■ Gamification (C)</li> <li>■ TV soaps where debt and financial stress are the characters' undoing.(S)</li> <li>■ Public advertising (S)</li> <li>■ SMS messaging about funding status or credit status</li> </ul>
<b>2. Ambivalence</b> "Well, maybe..." <i>Contemplation</i>	Person vacillates between reasons to change and reasons to stay the same.	Individual may see some benefits of curbing spending, but is unconvinced of the need for change or not ready to implement it yet. Individual may not be ready to let go of the apparent benefits of spending.	<ul style="list-style-type: none"> <li>■ Gamification (C)</li> <li>■ Interactive tools (C) (S)</li> <li>■ New employee on-boarding experience (C) (S)</li> <li>■ Social media campaigns</li> </ul>
<b>3. Preparation</b> "I'm ready. What do I need to do?" <i>Preparation</i>	Person recognises they must do something but may not know what to do. Needs specific plans to implement the change and a supportive coach to provide guidance.	This window of opportunity is genuine. Individual is open, motivated and interested in ideas and tools for new behaviours. Individual needs concrete help developing change strategies and a roadmap towards fiscal prudence.	<ul style="list-style-type: none"> <li>■ Gamification (C)</li> <li>■ Debtors Anonymous</li> <li>■ New employee on-boarding experience (C) (S)</li> <li>■ On-site advice kiosks</li> <li>■ Financial education websites</li> <li>■ Contact financial advisor</li> </ul>

Stage of readiness	General description	Relevance to the individual	What they may be responsive to Carrot (fun-C) and stick (scare-S)
<b>4. Action</b> "I'm doing it." <i>Action</i>	Person learns what to do differently and acts to bring about the change. Needs a knowledgeable coach to in-tune efforts, provide praise for success and lend support during setbacks	Individual works on spending issues despite the difficulty. Individual is receptive to input from the adviser and will benefit from coaching despite obstacles. As self-esteem and self-control improve, the change becomes real.	<ul style="list-style-type: none"> <li>■ Debtors Anonymous</li> <li>■ Interactive tools</li> <li>■ On-line personal plan roadmap</li> </ul>
<b>5. Maintenance</b> "I'm sticking with it." <i>Maintenance</i>	Person works on efforts to sustain the change by cementing new behaviours. Needs to remain optimistic in the face of struggle and learn from relapse episodes. If successful, the new pattern is now the status quo.	Individual works to stay with the financial plan and maintain spending limits. Individual needs structure to sustain the change and avoid getting derailed. Needs input from a patient coach, adviser or sponsor about learning from relapse(s), anticipating relapse risks, and staying on track with restrained spending.	<ul style="list-style-type: none"> <li>■ Debtors Anonymous</li> <li>■ On-line personal plan roadmap</li> <li>■ Breach reporting on your personal parameters</li> <li>■ SMS messaging on funding status or credit status</li> <li>■ Interventions at key 'teachable moments' (life changes or transitions)</li> </ul>
<i>Throughout all stages</i>			
<b>Relapse</b> "I screwed up." <i>Relapse</i>	A normal and sometimes necessary part of the change process. Relapses may occur in small or large ways as new behaviours struggle with old behaviours or with unexpected stressors.	Old habits reassert themselves and individual sometimes reverts to budget-busting behaviours. Emotional patterns also return, with embarrassment, helplessness and a sense of failure. Financial adviser or coach needs to help get client back on track and provide encouragement when individual feels depleted and discouraged.	<ul style="list-style-type: none"> <li>■ Breach reporting on your personal parameters</li> <li>■ Debtors Anonymous</li> <li>■ On-line personal plan roadmap</li> <li>■ Financial coach</li> </ul>

#### Step 4: Map an individual to the correct stage

Once we understand the six stages of change, the next task is to map an individual (or a whole company of individuals) to the correct stage. Again a fairly simple questionnaire or interview process handles this mapping neatly. And again, because this is a simple questionnaire, you can apply it to quite a large sample size at any point in time. Both the Grubman<sup>18</sup> and the Kerkmann<sup>19</sup> studies provide examples of the type of questions that could tease out the right insights about an individual's readiness for change.

This, in turn, informs the type of financial education programme that best suits this particular group of individuals. Clearly, the value of such an evaluation tool is that it allows you to identify a group of like-minded individuals and target member education or financial wellness programmes to best address their level of receptiveness. As research by Lusardi and Mitchell explains, "a short programme that is not tailored to a specific group's needs, is unlikely to make much difference<sup>20</sup>." Without such a step, then, the potential for wasting time, money and people's patience is beyond measure.

As an example at the end of this chapter, we include two strategies that have proven to be particularly effective with Stage 1, Stage 2 and Stage 3 individuals. Essentially, these are all individuals who are either disengaged or in total denial about their financial problems. Or they may be totally unaware that they have a problem because they never bothered to pay attention. The two strategies we consider are gamification and a support group called Debtors Anonymous.

**The value of an evaluation tool that helps you map readiness for change is that it allows you to identify a group of like-minded individuals and target member education or financial wellness programmes to best address their level of receptiveness.**

#### Step 5: Measures the outcomes

What's clear is that we need to place greater focus on measuring the outcomes of our efforts, if for no other reason than because there is a considerable investment at stake. While researchers have little or no information about the quality or content of workplace seminars, the more important question is whether any of these programmes promote behavioural changes. Information in this area is almost non-existent. Even more importantly, "there has been no carefully-crafted costbenefit analysis indicating which sorts of financial education programmes are most appropriate, and least expensive, for which kinds of people<sup>21</sup>."

In South Africa, the Financial Services Board (FSB) has conducted an extremely thorough exercise to establish a baseline for how our population scores in its ability to take financial action. The FSB followed much the same model that the OECD applied to establish a financial literacy baseline in other countries and identified the measurement<sup>22</sup> areas shown in the graph on the next page. The analysis is comprehensive and looks not only at what people know, but how well they apply it to make the right choices, establish the right priorities and consider both the short- and long-term implications of their choices<sup>23</sup>.

Unfortunately, because the FSB study doesn't use exactly the same methodology as the OECD study in all the areas of analysis, we can't compare the results to other countries in the OECD study. But what makes this an invaluable piece of measurement is that it can provide insights into what gaps exist, in which region of the country and with which population group in South Africa. It also means that we should be able to see if we're making any progress from year to year, where and, hopefully, why.

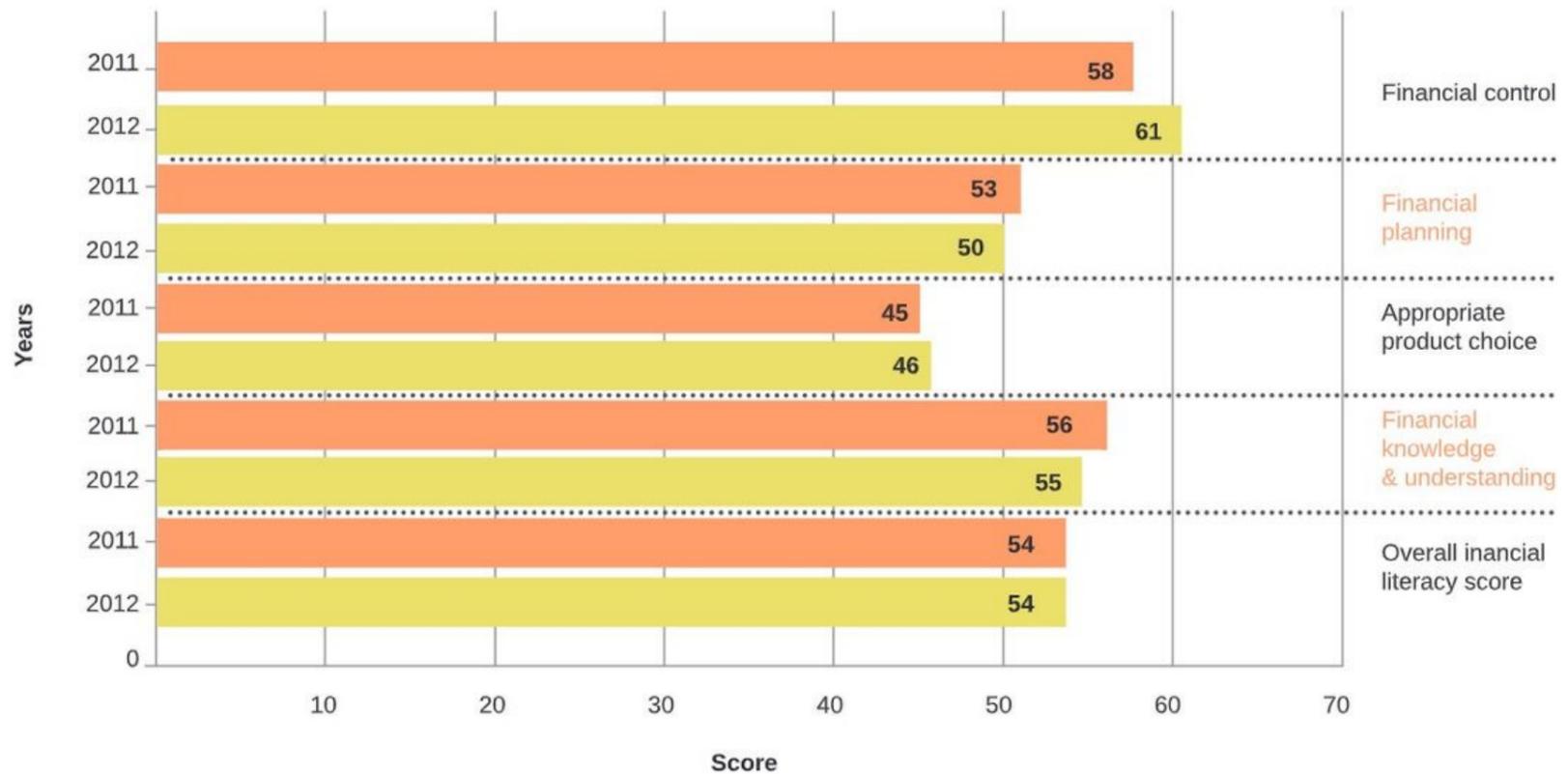


What's **clear** is that we need to place greater **focus** on **measuring** the **outcomes** of our **efforts**.



**We need to see if we are making any progress from year to year, where and why**

# FSB study on financial literacy in South Africa overall score for each measurement area, 2011-2012



Source: FSB (2013)

## Highlights of the FSB report on South Africa



Source: FSB (2013)

## Making ends meet

**45% personally experienced income shortfalls last year.** Little difference in response between 2011 and 2012.

**Two common coping responses: borrowing from family or friends (41%); cutting back on spending or doing without (43%) – nominal reliance on financial products.**

- > Increase in the share of South Africans cutting back on spending as a coping strategy between 2012 (43%), 2011 (35%) and 2010 (30%).
- > Decline in the share of South Africans borrowing from family/friends as a response to income shortfall between 2012 (41%) and 2011 (55%).

**Most important coping mechanism for South Africans is cutting back on expenditure or doing without.**

This was primarily a coping strategy more common among middle-income South Africans; the poor are more reliant on social networks

## Option 1

### What to do when employees just don't engage in the problem

#### The games people play

In Mark Twain's classic novel, Tom Sawyer, Tom dupes his hapless chums into whitewashing a fence for him by convincing them that the activity is so much fun that he doesn't want their help at all. Framed in this way, he did not need any extrinsic rewards, his friends begged him for the opportunity to take over the back-breaking task. So, how do you convince average employees who may be in stages of deep denial or ambivalence that they need to face their financial troubles head-on? Simple, invite them to play computer games.

At first, this approach may sound frivolous. But recent studies show the extraordinary educational value of games. Properly harnessed, they can be engines of productivity and learning. Companies that believe there's no place for games in the office are mistaken. In 2003, a study conducted at Carnegie Mellon revealed that workers wasted an astounding 9 billion work hours playing Solitaire that year in the US alone<sup>24</sup>. Nobody would argue that collective procrastination is good for humanity, but imagine the same lost time was instead captured by games teaching the principles of financial literacy. Games give people a structured experience with clear goals and a compelling sense of achievement and progress.

Beating a tough level triggers a jolt of dopamine in the brain, increasing engagement. Learning does not feel like work when you're playing a computer game. Instead it's an effortless by-product of exploring the game-world or solving the puzzles that will release more pleasurable chemicals into the brain. The best games gradually increase their difficulty in response to progress, tantalising players by keeping them on the edge of mastery as they seek ever more sophisticated information to conquer the next challenge. Importantly, these games leverage interactive global networks and provide forums for public ranking and social interaction that encourage participation. As game designer Ralph Koster puts it: "fun is just another word for learning"<sup>25</sup>.

## Option 2

### What to do when the employer is not the right platform for engagement

#### Debtor Anonymous

When financial problems reach crisis mode, it's understandable that the employer may be the last person an individual would want to inform or involve. Who can people turn to then? Particularly when the last thing they have the luxury to do is to pay someone for help? One of the more ambitious local financial education projects for the masses was Imali, an initiative of the Financial Education Fund, in collaboration with the Department of Trade and Industry, Finmark Trust, African Bank and the Credit Information Ombudsman.

Establishing centres in Johannesburg, Cape Town and Durban, the primary objectives of the project were to provide both advice for specific financial issues and to enable capacity to help clients resolve their own issues in the future<sup>26</sup>. Most importantly, the service was free. Unfortunately, the project lasted for only two years. Finding continuous funding was one problem. But there were also important questions around whether the model was effectively structured to meet its mission.

While the programme may have achieved some measure of success in helping its clients sort out complex problems with their service providers, it failed to provide the continuous engagement or enablement necessary for long-term results. What was missing was continuity on every level (same person, constant feedback, a sympathetic ear). Unfortunately the model was just not designed to cater for that<sup>27</sup>. One thing was clear from the exercise. There's definitely a need for free financial help, but there are also challenges:

- > How do you create a framework that gives individuals a continuous touchstone to get to the root of their financial difficulties?
- > How do you address the needs of a wide range of individuals in financial difficulty – not just the poorest of the poor? What model could possibly be wide-ranging but also free?
- > How do you get people to participate when their embarrassment and shame about their situation may well prevent them reaching out for help?
- > How do you strike the right balance between helping people solve complex financial and recognising that there are serious behavioural issues that may have to be addressed as well?
- > How do you provide 'support' without contravening the FAIS stipulations on 'advice'?

**The fact that financial counsellors use research about addictions and dysfunctional behaviour speaks volumes about why it's so difficult to curtail the debt cycle.**

Though the research on financial capability programmes may be thin at best, one strategy that does appear to be bearing fruit is the use of self-help peer groups<sup>28</sup>. The fact that financial counsellors use research about addictions and dysfunctional behaviour speaks volumes about why it's so difficult to curtail the debt cycle. Even if people are ready to act, they need support structures to ensure they do so timeously and stay the course in the longer term. Crucially, when people are in the 'relapse' stage, they need guidance and support to encourage them to try again. Addressing debt and bad financial decision making can hardly be handled in one or two sittings with a counsellor focused on a specific issue.

As Mullainathan and Shafir discovered, when people are financially stressed, their ability to problem solve declines dramatically. It's as if they get 'dumber'<sup>29</sup>. If breaking out of the debt cycle demands a complete lifestyle change, then we need to recognise that for most people, this challenge can only be addressed one day at a time. What we need is a programme that helps people learn how to put one foot in front of the other, until they can quietly build back their self-esteem and confidence to the point where they can start to learn more functional financial habits. We need a programme where people can emerge from the shame and embarrassment of financial difficulty.

A programme where they can emerge because they're sharing their experiences with others who won't judge them because they have been in a similar situation. But these peers have managed to work their way out of their financial hole and become teachers in their own right as a result of the experience. If this is all starting to sound a bit like Alcoholics Anonymous, it should. The concept behind Debtors Anonymous is almost identical. This 12-step programme is more than 40 years old and has gained traction in 22 countries around the world<sup>30</sup>. These 12-step programmes have been proven globally to be the most effective resource available to lead individuals back from the brink of crippling addictions or life crises.

On many levels, Debtors Anonymous is particularly well-suited for the South African context. It draws on the power of the group, not an external professional or service provider, as the primary source of help and guidance. It understands the power of a belief system to carry people through adversities that elude a purely rational or intellectual approach. It provides individuals with simple rules of thumb to get through the smallest financial and emotional challenges each day. It understands that when individuals are in crisis, this is not going to be a productive time for learning complex accounting and budgeting skills.

This is a voluntary group of individuals who come together for one reason: their lives have become unmanageable because of their financial difficulties and they desperately need a 'safe harbour' where they can gradually piece together their lives by learning coping mechanisms that address both their financial difficulties and the collateral damage brought on by these problems: broken families, lost jobs, shattered friendships. Most importantly, the programme incrementally helps people learn what to do to avoid slipping back into the debt hole.

**The power of sponsorship is that there is an individual who is prepared to be available 24/7. That's the intensity of the support needed for dramatic behaviour changes.**

Each member gets a sponsor, someone who has experienced the debt vortex but has learned how to navigate out of the crisis. The power of the sponsorship concept is that there is an individual who is prepared to be available 24/7 to the new member. And that's the intensity of support required to encourage dramatic behavioural changes. How do these programmes get up and running? One thing is certain, no financial services company can or should be involved. No service provider specialising in debt counselling or financial advice or other professional services company can be involved, except by invitation. Debtors Anonymous steers clear of any literature or financial support that might give the impression that they're associated with any particular interest group.

One group that could be instrumental in facilitating Debtors Anonymous meetings are the unions. But this can only work if there's a clear distance from any financial service operations the unions may be affiliated to. The bottom line is, for a group that exists to represent the best interest of workers without intruding on their lives, the idea that unions could be best placed to promote the concept of Debtors Anonymous, is worth exploring. Will it work? We think so.

## Conclusion

The first research results are trickling in and the message is unequivocal: we urgently need to change the conversation around financial education. Our current strategies are failing dismally due to a myopic focus on content rather than on the emotional turmoil of their intended audience. But bit by bit we are seeing small breakthrough ideas that are beginning to bear fruit. We need to focus our attention and resources where we know we can win, introduce ideas that appear to be winning in other parts of the world (as well as in South Africa) and then, most importantly, start measuring whether they do indeed make a difference.

## References

- 1 National Credit Regulator, December 2013
- 2 Statistics South Africa, Quarterly Labour Force Survey, Q4 2013
- 3 National Credit Regulator, December 2013
- 4 Peter Allwright, Garnishee Orders: Facts and Answers
- 5 Fernandez, Lynch & Natemeyer (2014)
- 6 Ibid
- 7 Meier & Sprenger (2008)
- 8 Ibid
- 9 Mulaj & Jack (2012)
- 10 Akerlof & Krenton (2010)
- 11 Bikhchandani (1998)
- 12 Prawitz, Garman, Sorhaindo, O'Neill Kim & Drentea (2006)
- 13 Prawitz & Garman (2008)
- 14 Prawitz, Garman, Sorhaindo, O'Neill Kim & Drentea (2006)
- 15 Prawitz, Shatwell, Haynes, Hanson, Hanson, O'Neill & Garman (2007)
- 16 Xiao, Prawitz, Proschaska, O'Neill, Kim & Garman (2014)
- 17 Grubman, Bollerud & Holland (2012)
- 18 Grubman Bollerud & Holland (2012)
- 19 Kerkman (1998)
- 20 Mitchell & Lusardi (2013)
- 21 Kerkman (1998)
- 22 FSB (2013)
- 23 Ibid
- 24 Rossignol J, This Gaming Life: Travels in 3 Cities
- 25 Koster (2005)
- 26 Imali Matters June/July 2011
- 27 Imali Matters Impact Assessment, December 2011
- 28 Kast, Meier, Pomerantz (2012)
- 29 Mullainathan & Shafir, Scarcity
- 30 <http://debtorsanonymous.org/>

[FINANCIAL EDUCATION](#)

[EMPLOYERS](#)

[FINANCIAL STRESS](#)

[RETURN ON INVESTMENT](#)

[BEHAVIOURAL CHANGE](#)

[FINANCIAL LITERACY](#)

[EMPLOYEE ENGAGEMENT](#)

[GAMIFICATION](#)

[DEBT](#)