

iGreen – the social networking study

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The three CHARM case studies investigated the impact of individual and social feedback on behaviour. This short paper gives a summary of the findings of the third of these, the *iGreen* study.

The iGreen app was developed to explore the use of Facebook to deliver individual and social norms feedback on aspects of everyday life that impact on environmental sustainability. The app was publicised to students at three universities and on a number of social networking sites. Users of the app were asked to complete the same short quiz on seven occasions over a period of at least six weeks and were incentivised to do so by prize-draws and access to sustainability-themed games. Those who downloaded the app were randomly assigned to one of three versions of the app: one that showed the participant's previous answer once they had answered a question; one that also showed the average response, and a control version that provided no feedback. Fifty-two people completed all seven quizzes and thirty of these were interviewed as part of this research.

This paper summarises the research and the emerging conclusions. Further details should become available on completion of the associated doctoral thesis being undertaken by Kavita Patel.

The aim of the iGreen app was to get users to complete the same short quiz seven times over a period of at least six weeks and to see whether this influenced their reported behaviour. The quiz questions covered topics such as whether users left the tap running while they cleaned their teeth; whether they bought bottled water; how often they took their own bags when shopping, and how often they showered or bathed during the week. Each time they answered a quiz question, participants in the two feedback versions were shown their previous answers. Those in the social norms version were also shown the average answer of other participants and, if they were 'better' than the norm, were shown up to three 'smiley' emoticons. (The quiz screens and feedback are illustrated in Figures 1 and 2.) Completion of each of the seven quizzes was incentivised by the promise of access to a new sustainability-themed game and entry into a prize draw.



Figure 1: Individual feedback



Figure 2: Social norms feedback

Over 2,800 people downloaded the iGreen app. Of these, 52 completed all seven rounds of the quiz and 44 also completed the concluding survey. Key characteristics of the achieved sample are shown in Table 1. Interviews with non-completers indicate that low completion rates were due to the repetitive nature of the quiz questions.

Table 1: Characteristics of the iGreen sample

	Female	Age	Degree-level education or higher	A-level or equivalent	GCSE-level or lower	“Very concerned” about the environment	Employed	Full-time student
Downloaded the app (N=2844)	47%	Mean: 29						
Completed the study (N=44)	49%	Median: 25-34	39%	48%	13%	39%	55%	27%

Some of the quiz answers changed over the study period, which indicates that behaviours may have changed as a result of participation. For example, the average quiz score for leaving a mobile phone charger on when not in use declined (Figure 3). However, there did not appear to be any change in respondents’ willingness to re-wear their clothes (Figure 4). Our analysis of the interviews suggests that participants were reluctant to adopt behaviours they considered “too green”, because they saw these as having potentially damaging social implications. For example, they were concerned about body odour if they showered less frequently.

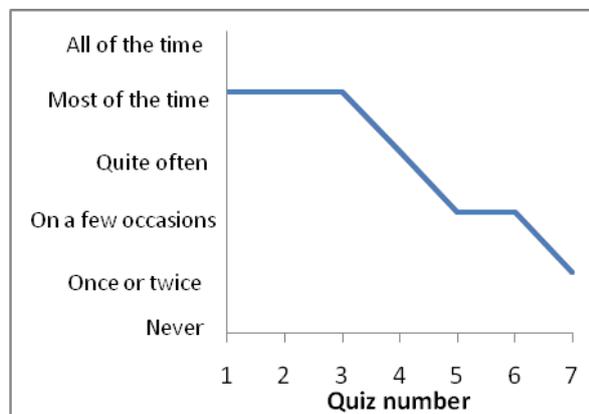


Figure 3: Change in average responses to the quiz question, ‘Last week, how often did you leave your mobile phone charger switched on at the socket when not in use?’

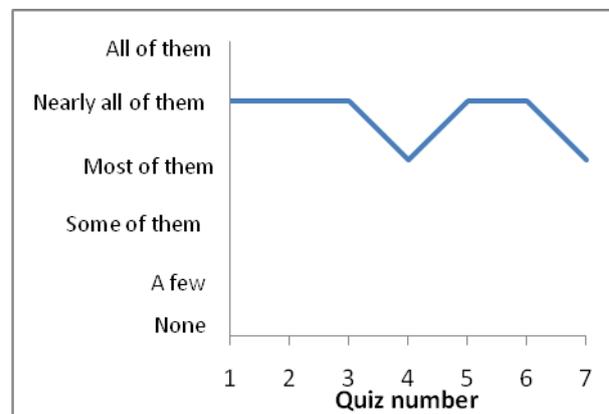


Figure 4: Change in average responses to the quiz question, ‘Last week, how many of your clothes did you re-wear before washing?’

There are a number of possible explanations for the changes in the answers given to some of the quiz questions. One of these is the sustainability framing of the app. The name of the app (‘iGreen’), the stated purpose of the app and the themes of the games all provided a clear sustainability framing. As a result, although the iGreen quiz questions were carefully designed and tested to avoid leading respondents to give particular answers, the overall framing might have caused users to lean

towards responses that suggested more sustainable behaviour. In other words, this framing might have invoked a social desirability bias¹, placing respondents under a degree of obligation to report that they had improved their behaviour.

Alternatively, the questions may have acted as implied injunctions that exhorted particular behaviours; or as *injunctive norms* (see *CHARM research summary paper 6*) that communicated societal approval of particular behaviours. Additionally, some participants reported being influenced by the games – for instance, some interviews suggest that participants may have been encouraged to reduce their use of standby by a game that displayed a series of standby switches and awarded points for the speed with which players clicked them off.

Finally, the interviews suggest that participants' behaviour might have been influenced by the repetition of the questions. There are several possible reasons why this might have been the case. Firstly, the repetition of the questions may have increased the salience of particular norms (Cialdini *et al*, 1990²). Secondly, the interviews suggest that the repetition may have helped some respondents to remember changes that they wanted to make (e.g. *"It's the quiz - it's a reminder to switch it off and it was laziness that I wouldn't"*). Thirdly, some interviewees said that knowing that they would have to answer the questions again encouraged them to behave more sustainably so that they would be able to give the *"right"* answers (e.g. *"when I started doing it [turning the tap off while washing dishes], it was basically because I knew I was going to be asked"*).

The interviews were inconclusive on the question of whether the feedback had any impact on the quiz answers. The interviews suggest that some of the participants who received social norms feedback believed themselves to have been influenced by it (e.g. *"When I realised that everybody actually turns their [mobile phone chargers] off, then maybe I should... maybe I should do that as well, you know? So that I improved on."*), but others did not think this feedback had influenced them at all.

This provisional analysis shows that social networking sites such as Facebook can be used as research tools and may have some power as instruments for encouraging pro-social behaviours. Quizzes are a popular feature of Facebook and the evidence of this study suggests that they can be used to increase awareness of the environmental aspects of everyday behaviours. However, the role of feedback is less clear, for it seems likely that, in this study, its impacts were obscured by framing effects and the influence of the questioning process itself.

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¹ Crowne, D. P. & Marlowe, D. (1960). 'A new scale of social desirability independent of psychopathology'. *Journal of Consulting Psychology*, 24, 349-354.

² Cialdini, R.B., Reno, R.R. & Kallgren, C.A. (1990). 'A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public places'. *Journal of Personality and Social Psychology*, 58(6), 1015-1026.