A Cross-Cultural Study of Motivations to Participate
in a Crowdsourcing Project to Support People with Disabilities

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Abstract

Crowdsourcing has now been used in many areas, including to support people with disabilities. We explored the perceptions of students from two countries with very different cultures (Libya and the UK) of what would motivate them to participate in a crowdsourcing project (DescribeIT) to support their blind and partially sighted peers by describing images in digital learning resources. Students reported that they were interested to participate and particularly motivated by their sense of altruism and wanting to help others. The results also showed that British students reported a mix of intrinsic and extrinsic motivations, whereas for Libyan participants intrinsic motivations dominated over extrinsic. The results of this study will help us design the DescribeIT system to motivate students most effectively and should make developers of international crowdsourcing projects aware that motivations may differ between participants from different cultures.

Introduction

Crowdsourcing is now used for many areas, including to support people with disabilities in problems they encounter in daily life. For visual disabled people, access to information continues to pose many problems, although many technological solutions have been developed. One area of importance is the use of many images in digital learning resources such as slides packs used by lecturers. These are rarely adequately described for blind and partially sighted students, which can greatly impede their ability to learn from the material effectively. We are developing a crowdsourcing project, DescribeIT, which allows sighted students to describe the images in digital learning resources. In this initial study, we wanted to investigate what students from two countries with very different cultures (Libya and the UK) thought would motivate them, and other students on their course, to participate in such a crowdsourcing project. This will help us create the most effective design for DescribeIT.

Method

Participants

119 university students, 74 British and 45 Libyan. British students comprised 45 women and 29 men, age range 18 to 51 years old, mean age 22.3 years. Libyan students comprised 32 women and 12 men (one did not answer), age range 18 to 42 years old, mean age 26.8 years. All students were undergraduate and postgraduate students from a wide range of disciplines. Only nine British and two Libyan students reported having participated in crowdsourcing projects.

Materials

The online questionnaire consisted of three sections:
1. Participation likelihood and overall motivation: asked students to rate the likelihood that they and other students on their course would participate in the project (1 = not at all likely to 7 = very likely) and explain their motivations.
2. Motivational factors: 12 motivational factors were presented (see Table 1), developed from research on motivation in crowdsourcing projects. Students were asked to rate whether each factor would motivate them to participate (1 = not at all to 7 very much). They were also asked to explain why they had given that rating.
3. Demographic and online activities questions: collected demographic information about participants and their online activities.

Procedure

A recruitment email with a link to the questionnaire was sent out to all undergraduate and postgraduate students at the Universities of York (UK), Benghazi University and Omar Al-Mokhtar University (Libya) in a range of humanities and science departments. A reminder email was sent out four days after the first email.

Results

Overall, students gave a mean likelihood rating that they would participate of 4.9 (SD = 1.8), significantly above the midpoint of the scale (t = 5.45, df = 118, p < 0.001). They gave a mean rating of 4.1 (SD = 1.55) to the likelihood of other students on their course participating, not significantly different from the neutral midpoint of the scale (t = 0.41, df = 118, n.s.). A two way analysis of variance showed that there was a significant difference between students' ratings of their own likelihood of participating and other students' likelihood of participating (F = 25.80, df = 1, 117, p < .001), with students in both countries giving higher ratings for themselves in comparison to other students. There was also a significant difference between the two countries (F = 4.39, df = 1, 117, p < 0.05) with students in Libya giving significantly higher ratings than students in the UK.

Students' ratings of what extent each of 12 factors would motivate them to participate are summarized in Table 1. One-sample t-tests tested whether the ratings of the 12 motivational factors differed significantly from the neutral midpoint of the rating scale (indicated with a + or – in Table 1) and showed a number of significant differences. A two way analysis of variance showed that there were significant differences between the ratings of the 12 motivating factors (F = 26.59, df = 11, 1287, p <.001), but there was no overall significant difference between ratings by British and Libyan students (F = 2.86, df = 1, 117, n.s.). However, there was a significant interaction between motivating factors and country (F = 8.63, df = 11, 1287, p < .001), meaning that the pattern of ratings was different between the different countries (significant differences between the countries are indicated in Table 1 with *).

Discussion and Conclusions

This study of British and Libyan students' perceptions of their own and other students' motivations to participate in a crowdsourcing project to help visually disabled students has yielded interesting results. Overall the students rated their likelihood of participating as positive (significantly above the midpoint of the scale), although they thought the likelihood of other students was only neutral. In addition, Libyan students gave significantly higher ratings of both their own and other students likelihood of participating in comparison to UK students, showing an overall cultural difference.

When presented with 12 typical motivational factors, students rated these significantly differently, with altruism being the only positive factor on which Libyan and UK students agreed. Other positive motivators for the Libyan students were the fun and entertainment of the activity and knowing they were contributing to a large project, whereas for UK students they were being paid and enhancing job opportunities. The results also showed that British students reported a mix of intrinsic and extrinsic motivators, whereas for Libyan students intrinsic motivators dominated over extrinsic motivators.

The results of this study will help us design the DescribeIT system to motivate students most effectively to participate in the process of describing images for their blind and partially sighted peers. Crowdsourcing projects are often international, so developers need to be aware that what motivates different cultural groups may well vary. Finally this study has asked students what would motivate them, in evaluating the implemented system, we will investigate how students' self-reports compares with their actual behavior.

Motivational factor	Mean Rating (SD) UK	Mean Rating (SD) Libya	Mean Rating (SD) All
Your sense of altruism, wanting to help other students (IN)	5.42 (1.51) +	5.91(1.87) +	5.61 (1.66)
Improving your academic skills (EX)	4.15 (2.14)	5.00 (2.26) +	4.47 (2.21)
Being paid for your efforts (EX)	5.04 (2.02) + *	2.84 (2.39) - *	4.21 (2.41)
Enhancing your job opportunities in the future (EX)	4.53 (2.05) +	4.69 (2.47)	4.59 (2.21)
Being connected with other students on course (IN/EX)	3.57 (2.07)	4.53 (2.29)	3.93 (2.20)
The fun and entertainment of the activity (IN)	4.11 (1.93)	4.82 (2.38) +	4.38 (2.13)
To pass the time (IN)	2.88 (1.78) -	2.60 (2.19) -	2.77 (1.94)
Knowing that you are contributing to a large project (IN)	4.36 (1.65)	5.13 (2.28) +	4.66 (1.94)
The social recognition you would receive (EX)	2.54 (1.71) -	3.44 (2.50)	2.88 (2.08)
Drawing attention to your skills (EX)	2.97 (1.87) -	3.69 (2.37)	3.24 (2.09)
Being in a competition with other students (EX)	2.18 (1.67) - *	3.91 (2.40) *	2.83 (2.14)
Getting academic credits (EX)	4.28 (2.11)	3.96 (2.51)	4.16 (2.27)

*Table 1: The 12 motivational factors (EX = external motivator, IN = Internal motivator; + = significantly above the midpoint of the rating scale; - = significantly below the midpoint; * = UK and Libya significantly different in rating)*