EDC | CENTER FOR CHILDREN AND TECHNOLOGY

Evaluation of Breakthrough's
ICED! Video Game

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EXECUTIVE SUMMARY

Breakthrough, an international human rights organization, developed the *ICED! ("I Can End Deportation")* video game in order to educate a wide audience about unfair U.S. immigration laws and practices and deportation policies. In winter 2007, Breakthrough engaged the Education Development Center/Center for Children and Technology (EDC/CCT) to assess changes in *ICED!* game players' knowledge and attitudes about U.S. immigration and deportation policies due to game play. EDC/CCT developed a 14-item, online, pre/post questionnaire to collect data in order to answer the following two evaluation questions:

1. Does playing *ICED!* increase players' knowledge about U.S. immigration and deportation policies, as they are addressed in the game, from pre to post?

2. Does playing *ICED!* influence players' attitudes about U.S. immigration and deportation policies from pre to post? If so, how has it done so?

The questionnaire items addressed three broad content areas to which players are introduced in the game: U.S. immigration policies; immigrant detention and deportation policies; and immigrants' civic behavior options as they are influenced by policies and laws.

A third question emerged during our content analysis of players' open-ended responses to a posttest question about whether game play had changed their attitudes:

3. How do experiences during the game influence learning outcomes and attitude changes?

We analyzed questionnaire responses from 6,007 cases. One hundred twenty-nine players completed all pre and post questionnaire items, 99 of whom had complete data sets (in which all survey items were completed) for assessment. Our analysis yielded the following findings, discussed in greater detail in the report:

1. **Playing *ICED!* contributed to an increase in player knowledge about U.S. immigration and deportation policies.** An analysis of the paired pre/post knowledge scores for a group of 99 respondents revealed a mean score increase from pre to post game play: average 6 out of 12 correct at pre, 9 out of 12 correct at post (t (98) = -8.02, <.001). Similarly, the trends in the much larger groups of players who only completed the pre (n=5148) or posttests (n=730) suggest that playing *ICED!* did lead to gains in learning outcomes.

2. **Over half (56.5%) of the respondents in the matched pre/post group indicated that playing *ICED!* had changed their attitude about the ways in which immigrants are treated in the United States.** While the majority of respondents did not complete the open-response associated with this question, those who did indicated the game had changed their attitudes positively toward immigrants' rights.

Our third question about player experiences during game play revealed several broad themes:

- Perspective taking and role playing enabled some players to consider the facts presented in the game from immigrants' points of view;

- Ethical and situational dilemmas encountered by immigrant characters in the game engendered strong written responses to the open-ended question, primarily in two directions: some players argued that the scenarios revealed a strong bias among the

game developers, while others wrote that they did not realize how precarious day-to-day living can be for immigrants; and

- Several players noted that playing *ICED!* might contribute to a heightened distrust of local law enforcement authorities by stating that immigrants face a greater risk of detention and deportation by reporting crimes.

These findings suggest *ICED!* is an effective tool for educating a broad audience about facts associated with these issues and for influencing their attitudes about U.S. immigration policies.

In the final section of this report, we include the following recommendations—based on our analysis of the data—for Breakthrough's future efforts that will involve games:

- Consider embedding content into problem-based scenarios that require the application of knowledge that players have learned in the game—as well as what they have learned through their own experiences—rather than presenting it through true/false dichotomies

- Provide clear links to the sources for the content presented in the game so that players can explore the material beyond *ICED!*

- For future data collection, Breakthrough should consider devices that automatically send players to the posttest, rather than giving them the option to click through

- If *ICED!* is used as a tool to complement a classroom curriculum, consider asking an open-ended question about player attitudes toward U.S. immigration policies in the pre and posttests in order to explore whether and how game play influences those attitudes

OVERVIEW

Breakthrough, an international human rights organization, developed the *ICED! ("I Can End Deportation")* video game in order to educate a wide audience about unfair U.S. immigration laws and practices and deportation policies. The game's core message is that U.S. policies often deny immigrants due process under the law and fail to respect basic human rights that should be accorded to all people, regardless of citizenship status.

ICED! is a single-player, downloadable video game that introduces game players to injustices within American immigration policies by placing them in the role of one of five immigrant teen characters in an urban setting. As they traverse the city, players are confronted with a series of dilemmas that problematize immigrants' status in society and reflect the tenuous position of immigrants in the United States. The dilemmas challenge players to reflect on how immigrant options are influenced by unfair policies. Additionally, players learn about U.S. immigration policy by taking mini Fact/Myth quizzes throughout the game. The challenge is to avoid the immigration authorities and to be offered citizenship by the end of the game. If immigration officers detain them, however, players are thrown into a detention center. Once in detention, players are exposed to the difficult conditions confronted by immigrants there: unfair policies, isolation, and the possibility of deportation.

In winter 2007, Breakthrough engaged the Education Development Center/Center for Children and Technology to evaluate changes in player learning and attitudes about U.S. immigration policies and the immigrant experiences they inform. To that end, EDC/CCT developed a brief, online questionnaire to assess player knowledge and attitudes, to be answered immediately before and after game play.

Image 1: Screenshot of *ICED!* characters

METHODS

In order to assess player knowledge of U.S. immigration policies and the challenges faced by legal and undocumented immigrants before and after playing the game, EDC/CCT created and administered a 14-item, pre/post, online questionnaire that addressed three broad content areas:

1. U.S. immigration policies

2. Immigrant detention and deportation policies

3. Civic behavior options and ethical dilemmas for immigrants

Two of the fourteen questions in the pre and posttests addressed player attitudes toward immigrants' rights before and after playing *ICED!*

We designed the pre and post survey questions to assess players' learning about factual content presented in the game, rather than to determine whether they developed more complex, conceptual understandings of the issues associated with the content area, which would require a more comprehensive evaluation of the game, its accompanying curriculum, student experiences, and the interaction of these elements. Used as a stand-alone learning tool, success in *ICED!* does not require players to demonstrate an understanding of the variety of viewpoints on U.S. immigration and deportation policies. Rather, the content to which players are introduced in *ICED!* is primarily in the form of declarative knowledge—that is, "knowing that…"— and can typically be assessed using true-false items. The game introduces players to facts about laws and policies and challenges them to consider how those policies may influence or limit the options and behaviors that are open to immigrants in the United States.

To determine whether game play influenced player learning of the content, identical questions were asked in the pre and post instruments. Additionally, the posttest contained one open-ended question that invited respondents to explain whether they thought game play had changed their attitudes about U.S. immigration policies and how; findings are discussed in Section 2 below.

FINDINGS

1. Analysis of knowledge and attitude questions

General description of the respondents

Though player responses to the surveys are ongoing as of this report's completion, we downloaded 6,600 survey responses from the SurveyMonkey website for analysis. After eliminating redundancies (self-reported e-mail addresses were used as identifiers), we analyzed 6,007 cases.

One thousand one hundred two respondents (18.3%) did not indicate their sex. Of those who did, 3,587 (59.7%) were male and 1,318 (21.9%) were female.

The median age group for all those who reported (1,065, or 17.7%, did not report their age) was 25 (24 for females, 26 for males). The column on the extreme right of Figure 2 below (46+) represents the "older than 45" category and comprises 7.5% of the total respondents who reported on age. Because it was generated as a category in SurveyMonkey (rather than as an open-ended, continuous variable), it is impossible to determine the age of those respondents.
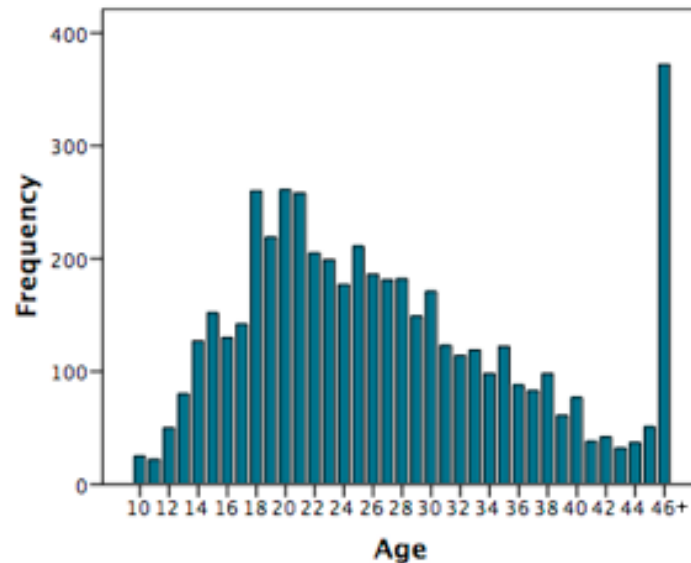

Figure 2: Frequency of respondent age group

In response to a pre-game question about personal experience with U.S. immigration, 2,365 respondents (46.1%) answered that they had personal experience with immigration issues**.** Of those, 741 answered that they were involved personally; 969 reported that a member of their family had experiences with immigration issues; 978 reported that they had friends who had experiences with immigration issues; and 747 reported that members of their community had experiences with immigration issues.

Analysis of pre and post questionnaire items

This section comprises two parts:

1. A description of the responses from those who completed the PRE or POST SURVEY ONLY (5,878, or 98% of total responses). As these responses are not matched before and after game play, we cannot draw conclusions about the game's influence on player learning as assessed through this questionnaire for these groups; and

2. An analysis of 99 MATCHED PRE/POST questionnaire responses (based on matching e-mail addresses—30 cases were eliminated due to missing data), as well as responses to an open-ended question in the posttest. Because the responses are matched for this latter group, we can draw conclusions about the influence of game play on learning outcomes.

I. *Description of PRE or POST ONLY responses*

The two groups described in this section did not complete both pre and posttests and CANNOT be compared for learning outcomes:

- 5,148 respondents completed the pretest only; and

- 730 completed the posttest only

Table 1 below displays the overall percentage of correct responses to each of the twelve content questions for these two groups. Each survey item had four possible responses: "False," "It might be false," "It might be true," "True." Based on the game content, each question had one correct response (true or false) and three incorrect responses.

Although it is not possible to discuss learning outcomes through game play for these two groups because they are not matched from pre to post and may not contain the same individual respondents, it is useful to note that the overall percentage of correct answers is higher for every question in the post only group, which suggests that playing the game led this group to answer more of the content-related questions correctly.

Survey question	% correct for PRE ONLY group	% correct for POST ONLY group
1. Immigrant children who have spent most of their lives in the United States can be deported against their will. *(TRUE)*	54.5%	63.5%
2. Undocumented immigrants pay many of the types of taxes that U.S. citizens pay. *(TRUE)*	52.8%	57.6%
3. Once immigrant children have lived in the United States for a certain period of time, they cannot be deported against their will to the country in which they were born. *(FALSE)*	52.6%	62.7%
4. Because the police don't ask about immigration issues, legal and undocumented immigrants are as free to report crimes to the police as citizens are. *(FALSE)*	31.8%	48.6%
5. By enrolling in the military, immigrants are automatically guaranteed the right to American citizenship. *(FALSE)*	45.3%	57.5%
6. Immigrants are guaranteed the right to obtain an attorney who can fight for them. *(FALSE)*	28.7%	54.8%
7. A minor offense like shoplifting or spray painting walls is treated much more severely for immigrants than for citizens and can result in detention and/or deportation. *(TRUE)*	54.3%	63.9%

Survey question	% correct for PRE ONLY group	% correct for POST ONLY group
8. Immigrants harm the economy by taking jobs away from citizens and by not paying taxes. *(FALSE)*	54.9%	53.9%
9. Once they are detained, the government can move immigrants to other detention centers without notifying their families. *(TRUE)*	48.5%	62.6%
10. Like all U.S. citizens who are prisoners, immigrants have access to an attorney to argue for them while they are in detention. *(FALSE)*	30.3%	53.2%
11. Legal and undocumented immigrants have to be cautious about reporting crimes that they witness because they might get detained or deported. *(TRUE)*	37.7%	52.4%
12. The U.S. allows the majority of asylum seekers to stay in the country. *(FALSE)*	50.4%	54.5%

Table 1: Percentages of total correct responses for pre and post knowledge questions for PRE or POST ONLY respondents

Table 2 below summarizes the overall percentages of each possible response for the attitudinal questions for those who responded to the pre or posttest only. Unlike the knowledge question responses summarized above, attitudinal questions are neither correct nor incorrect. *Again, these groups are not matched and we CANNOT compare pre and post percentages for change in attitude.*

	% for PRE ONLY group				% for POST ONLY group			
	False	**It might be false**	**It might be true**	**True**	**False**	**It might be false**	**It might be true**	**True**
13. All immigrants should have access to due process and a fair day in court.	14.2%	10.1%	17.3%	58.4%	24.6%	10.8%	11.4%	53.2%
14. Immigrants and U.S. citizens should have the same human rights.	12.6%	8.2%	10.7%	68.4%	21.2%	10.7%	8.4%	59.7%

Table 2: Percentages of responses to pre and post attitude-oriented questions for PRE or POST ONLY respondents—unmatched from pre to post and not for comparison

Four hundred fifty-seven players (62.6%; 80 players did not respond) in the post only group indicated that the game had changed the way they thought about how immigrants were treated in the United States. Thematically, a number of topics emerged from players' open-ended responses that are similar to those in the matched pre/post responses reviewed in the following section and are discussed below.

II. *Analysis of MATCHED PRE/POST responses*

Learning outcomes

One hundred twenty-nine respondents (2%) completed both the pre and posttest questionnaires. A statistical t-test revealed that there was a significant increase between the average number of correct answers at pre (Mean = 6.01) and at post (Mean = 8.97) on the twelve knowledge questions (t (98) = -8.02, <.001; 30 cases were not included in the analysis due to missing data), suggesting that game play influenced player knowledge about the content area. Because the cases in this section are matched from pre to post, we can speak more conclusively about the influence of *ICED!* game play on learning outcomes.

Table 3 below displays the overall percentages of respondents who answered correctly for each of the twelve knowledge questions. From pre to post, the percentages increased for every item: on average, 52.2% of the questions were answered correctly at pre, while 70.9% were answered correctly at post.

Fifty percent or fewer of the respondents in the matched group answered questions 4, 6, 10, 11, and 12 (in red typeface in Table 3) correctly during the pretest. These same questions are included in the "low group" for pre only respondents in Table 2 above. Within the matched group, the percentage increase for each of these items from pre to post was significant—32.1%, 35.7%, 20.8%, 14.6%, and 13.5% respectively—and suggests that the post scores for the larger pre only group of respondents might also have increased had they completed the posttest.

Survey question	% correct at PRE	% correct at POST	% increase
1. Immigrant children who have spent most of their lives in the United States can be deported against their will. *(TRUE)*	66.9%	77.8%	10.9%
2. Undocumented immigrants pay many of the types of taxes that U.S. citizens pay. *(TRUE)*	53.8%	76.9%	23.1%
3. Once immigrant children have lived in the United States for a certain period of time, they cannot be deported against their will to the country in which they were born. *(FALSE)*	55.5%	75.6%	20.1%

Survey question	% correct at PRE	% correct at POST	% increase
4. Because the police don't ask about immigration issues, legal and undocumented immigrants are as free to report crimes to the police as citizens are. *(FALSE)*	44.1%	76.2%	32.1%
5. By enrolling in the military, immigrants are automatically guaranteed the right to American citizenship. *(FALSE)*	53.8%	76.2%	22.4%
6. Immigrants are guaranteed the right to obtain an attorney who can fight for them. *(FALSE)*	36.4%	72.1%	35.7%
7. A minor offense like shoplifting or spray painting walls is treated much more severely for immigrants than for citizens and can result in detention and/or deportation. *(TRUE)*	64.7%	73.8%	9.1%
8. Immigrants harm the economy by taking jobs away from citizens and by not paying taxes. *(FALSE)*	53.0%	58.5%	5.5%
9. Once they are detained, the government can move immigrants to other detention centers without notifying their families. *(TRUE)*	58.5%	75.0%	16.5%
10. Like all U.S. citizens who are prisoners, immigrants have access to an attorney to argue for them while they are in detention. *(FALSE)*	39.0%	59.8%	20.8%
11. Legal and undocumented immigrants have to be cautious about reporting crimes that they witness because they might get detained or deported. *(TRUE)*	50.4%	65.0%	14.6%
12. The U.S. allows the majority of asylum seekers to stay in the country. *(FALSE)*	50.4%	63.9%	13.5%

Table 3: Percentages of total correct answers for pre and post knowledge questions for MATCHED PRE and POST respondents

Attitudes

Table 4 below summarizes the overall percentages of each possible response for the attitudinal questions for matched pre/post respondents. Most notable, perhaps, is the increase from pre to post in the percentage of respondents who indicated that they felt that the statement "All immigrants should have access to due process and a fair day in court" was false. Based strictly on questionnaire data, it is difficult to account for this increase as a nearly identical number of respondents who indicated that the game had changed their attitude toward immigrant treatment checked this

response (14 for the attitude change group, 15 for the no attitude change group) in the post questionnaire. Additionally, content analysis of the open-ended responses for these respondents does not clarify the change.

As this response contradicts other findings in the data, it is possible that the disparity is due to a limitation in the questionnaire item and interviews with these respondents would be useful in order to develop greater insight into this change.

The relatively high percentages of "True" answers (particularly to question 14) suggests that the majority of players in this group already agreed with the game's core message about due process and human rights and may explain their willingness to complete both pre and post questionnaires.

	% for PRE				% for POST			
	False	**It might be false**	**It might be true**	**True**	**False**	**It might be false**	**It might be true**	**True**
13. All immigrants should have access to due process and a fair day in court.	14.4%	5.1%	12.7%	67.8%	23.8%	4.9%	6.6%	64.8%
14. Immigrants and U.S. citizens should have the same human rights.	9.2%	3.4%	5.9%	81.5%	10.7%	3.3%	2.5%	83.5%

Table 4: Percentages of responses to pre and post attitude questions for MATCHED PRE and POST respondents

Seventy (56.5%) respondents in the matched group indicated that their attitudes toward the way in which immigrants are treated in the U.S. had changed due to game play; fifty-four (43.5%) indicated that their attitude had not changed. Comparisons between the average number of correct answers at post did not reveal any significant difference for these groups, suggesting that knowledge gains as measured by this questionnaire had little, if anything, to do with attitude change. A discussion of the open-ended responses associated with attitude change follows in Section 2 below.

Discussion

The data described above suggest that *ICED!* is an effective tool for increasing knowledge of the facts associated with the issues addressed in the game, as well as for influencing player attitudes toward them. In the matched group of 99 respondents who completed both the pre and post questionnaires, the mean number of correct answers increased from 6 to 9, indicating that players did learn about the content through game play. Further, the percentage of correct answers increased from pre to post for every item, suggesting that the game is effective at introducing players to facts across the three broad areas that the questionnaire assessed. Additionally, the descriptive data about the post only group (in Table 1 above) suggests that the game influences learning: again, for every item, the overall

percentages of correct answers were higher than those of the pre only group. Given the changes in the matched group, we can infer that similar increases would have resulted had the post only group completed both the pre and posttests.

ICED! is also effective in influencing players' attitudes toward the treatment of immigrants in the United States—the majority of respondents in both the post only group (n = 457) and in the matched group (n = 70) indicated that the game had influenced their attitudes. We should consider the phrase "attitude change" carefully, however, as some open-ended responses reveal that a number of players already agreed with the points introduced in the game and that playing *ICED!* helped them either to clarify their feelings or to learn something that supported what they already felt. Of the respondents in the matched pre/post group, no one wrote that the game had reversed their attitudes toward U.S. immigration policies, as they existed before game play. Rather, playing the game may have strengthened attitudes that players already had, even in cases where they had negative feelings toward undocumented immigrants.

To develop a richer understanding of how the game influenced player attitudes, as well as how it influenced learning outcomes, we should turn to an discussion of players' open-ended responses about attitude change.

2. Analysis of open-ended responses

Respondents in the matched pre/post and post only groups wrote a wide variety of responses to the following question: *Did playing this game help change your attitude about the way that immigrants are treated in the U.S? Why or why not?* All of the responses from pre/post respondents are included in Appendix B of this report. A content analysis of these comments revealed several themes related to learning about the issues addressed in the game:

Perspective taking and role play

A number of players wrote about the opportunity to experience the game "through immigrants' eyes." A 31-year-old female wrote, "It made me put myself in their shoes and made me realize certain things I hadn't known before." Similarly, a 25-year-old female wrote, "It's hard to be an immigrant today! This helped me see the world from a different perspective." A player in the post only group (we do not have personal data for this group) whose attitude had been changed by playing wrote:

> *I've always considered myself relatively educated on the harm done to undocumented persons, but this game was able to put me personally in the role of someone in this situation. It allowed the information given to stick in a way a lecture or an information sheet couldn't.*

While these three players indicated that the game had changed their attitudes toward immigration policy, one 30-year-old female respondent whose attitude did not change wrote:

> *First of all, when "I" was detained in this game, it was because "I" did not follow the rules and report a change in my living situation. These rules are very similar to that of a parolee that is a U.S. citizen, they have to follow the laws. As an American citizen, I do not have a lawful right to commit a crime. The fact that ANY illegal immigrants are allowed to commit illegal entry & illegally reside in the U.S. for any length of time, is already giving them more leeway than an American citizen. I do not agree with detaining them, unless they committed a 2nd crime, if the*

sole crime committed was illegal entry & residence then I think they should be immediately deported to their country of citizenship. As far as children of illegal immigrants that live the majority of their lives here, I do not believe families should be split up… therefore, I believe the family should be deported together. I only wish that illegal immigrants wouldn't put their children in that situation in the first place. And, regarding taxes, the majority of the few tax-paying illegals make so little that they qualify for EIC (Earned Income Credit) and are refunded all taxes they paid in. On a personal note…when my father was a child, he and my grandmother did things the right way when they legally immigrated here from Mexico. I have a lot of respect for people who want to be an American citizen so strongly, that they respect our laws in order to do so.

This respondent also took the perspective of an immigrant as she played, but her attitude toward rules and laws clearly went unchanged.

Related to role play and perspective taking are the characters' back stories. A 24-year-old female player wrote,

…if one simply does not do drugs, or does not steal, then they wouldn't get into trouble. So I have little sympathy for those like your character Anna. Ayesha's plight is similar to every American, except that she was treated far more harshly than a citizen would be for the same offenses (I am referring to the essay she wrote). Marc also falls into a trap that many young confused students or impoverished youth fall into; however I believe that the military's recruitment methods are another (large, and equally of note) issue entirely…

While we cannot make generalizations about role play, learning outcomes, and attitude change in *ICED!,* it is clear that playing the game "in an immigrant's shoes" did influence some players' understanding of the issues and allowed them to reflect on how laws and policies might affect immigrant lives, regardless of whether the game was instrumental in changing attitudes.

Ethical and situational dilemmas

A number of respondents wrote about the "ethical dilemmas" with which legal and undocumented immigrants may be confronted, as they were experienced in the game. Significantly, question 4 of the survey ("Because the police don't ask about immigration issues, legal and undocumented immigrants are as free to report crimes to the police as citizens are.") revealed the second highest percentage increase from pre to post (32.1%). The issue elicited several lengthy responses.

An 18-year-old male player wrote:

I did not realize there were so many things that immigrants had to deal with/be cautious of while living their lives day by day. I thought I knew many of the issues concerned with immigrants but I was mistaken. Although I still think immigrants should not have as much legal help as legal citizens because they aren't legal so they shouldn't have that right. Legal immigrants certainly should though.

A 20-year-old female player noted, "…I already believed that everyone—no matter their citizen status—should have equal rights and opportunities. But it did help me realize the situation that many immigrants are facing. The most intense was 'the hole'—the ultimate feeling of helplessness, hopelessness, and loneliness…." A 14-year old female respondent noted, "…now I know how

dangerous it could be to just walking in the streets just going shopping. One minute your (*sic*) happy and the next you are found dead." Finally, a 31-year-old male respondent wrote, "I thought that they are free to report crimes and that police will not deport them or turn them to Homeland Security or ICE. The treat they receive is a total violation to human rights. I can see how organizations protect better the animals than Immigrants. It is not fair."

Those whose attitudes were not changed by the game also addressed the issue. A 29-year-old male wrote:

> *I am a supporter of immigration rights reform, but I found the game bias to the point that by then end of the game I no longer trusted the Facts being gives. I feel that this game also hurts the campaigns that many police precincts have to inform people that immigration enforcement is not one of their jobs, and that—everyone—should feel safe reporting crimes…*

A 34-year-old male wrote, "This game has taken an extremely biased, anti-government stance. The 'facts' reported are based on opinion and do not hold up to true statistics. It is unfortunate the creators of this game have chosen to ignore criminal statistics, true arrest and deportation figures and have instead perpetuated fear and mistrust." Similarly, a 24-year-old male player argued:

> *This game totally distorts the legal process. I played as Suki. First, you claim that ICE just runs around town arresting everyone. This is completely false. Even if the did ask Suki about his immigration status, he could always refuse to talk to ICE without a warrant. Second, your concept of a detention center is completely wrong. For low priority aliens, like Suki, they would be placed in barracks, not pods. There would be no right to just walk around the yard. I even saw a female detainee with the men. Third, he goes to his Master Hearing with the IJ and gets a removal order. He could have claimed asylum and bonded out or at least have asked for voluntary departure. Finally, you advocate that immigrants should fear the police. This is morally and ethically wrong. While I cannot attest for the entire United States, police in my hometown are happy to assist immigrants and often sign U visa affidavits on their behalf. If an illegal immigrant rape-victim came to me, I would tell her to go to the police, cooperate, testify, and get a U visa without hesitation…*

This respondent's comment about "fearing the police" was echoed by a number of others who felt the game might inadvertently contribute to a greater distrust of law enforcement official by immigrants. A 28-year-old male respondent, who indicated that the game had changed his attitude about immigration policies, commented:

> *I got really scared by looking at the detention centers, thinking about the fact that just for a random thing, even by mistake, a person could be thrown into prison, lose his loved ones, and actually go home, home to his country of origin. Therefore, I also do not see how this game is to help immigrants other than to scare them. Maybe you learn a lot of "facts" about U.S. immigration laws and their treatment by the government or common opinion but that is about it.*

A 20-year-old female wrote, "…I already felt this way and my story is the same as Javier. It probably helped me be more cautious and worried about doing anything wrong in society."

Player experiences of the situational dilemmas that they confronted in *ICED!* are obviously complex. As the open-ended responses indicate, some players found them helpful as a means by which to develop a greater understanding of the challenges that exist for immigrants, while others suggested that they might do immigrants a disservice by reinforcing a fear of legal authorities. At least one immigrant player suggested that playing the game might lead him to be more cautious in his behaviors in order to avoid any "wrongdoing."

The situational dilemmas confronted by the game characters elicited strong responses from players who completed the open-ended response in the posttest. Some suggested that the game dilemmas clarified what they already knew or felt about policies toward immigrants, while others felt that the situations were biased and represented only part of "the story."

Coupled with the opportunity to play the game from an immigrant's perspective, the ethical dilemma and situational challenges in the game clearly elicited strong responses from a number of players, regardless of whether game play had changed their attitudes about U.S. immigration policy. Given the large percentage increase in correct answers to the questionnaire item (question 4) associated with this topic, as well as the number of detailed open-ended responses, it is reasonable to suggest that this game device promotes player reflection on these issues and, at least in terms of the content assessed in this evaluation, facilitates learning. The range of positive and negative responses, however, suggest that it may be controversial and lead some to become increasingly fearful of legal authorities.

RECOMMENDATIONS

Given Breakthrough's goal of using *ICED!* as a tool for teaching facts about U.S. immigration and deportation policies, as well as to influence people's attitudes toward those policies, we suggest that future versions of the game include the following changes or additions in order to encourage richer, more complex thinking about these issues:

1. Rather than presenting content in terms of true/false dichotomies, consider embedding it in problems that require game players to apply what they learn through game play to the solutions. As one player noted, "All of the 'quiz' questions are telegraphed; I had only to ask myself 'What is this question trying to imply?' and I received a perfect score." While the majority (83.5% for the matched group, 59.7% for post only group) of all respondents indicated that immigrants are entitled to the same human rights as U.S. citizens, many seemed to feel that these "situational dilemmas" are complex and perhaps less easily answered through true-false options. Game problems that require players to consider multiple perspectives in order to solve problems may help them to develop a richer understanding of the real-world problems.

2. Provide clear links to the sources for the content presented in the game. One player in the post only group wrote, "I was irked by the fact you did not have sources for your facts. It seems to be a convenient compartmentalization of the whole immigration issue, which is fine for your purposes. However, as this is—in many ways—a generalization of the matter, I think you are getting away with a lot without backing up a lot at the same time." In their open-ended responses, many players wrote that the game was biased, or was revealing "only half the story." While game play allows players to contextualize issues, links to sources might allow them to explore the issues on their own and to develop a greater sense of confidence in the information that is presented.

3. For future data collection, Breakthrough should consider "tightening" the connection between pre and posttest. Given the disparity in terms of respondent numbers for the pre or post only group and the matched group, it may be too easy for players to complete one or the other questionnaire, but not both. An increase in matched pairs will facilitate more analysis in terms of player learning outcomes and attitude changes.

4. If *ICED!* is used as a tool to complement classroom curricula, consider asking an open-ended question about player attitudes toward U.S. immigration policies in the pre and posttests in order to explore whether and how game play influences those attitudes

APPENDIX A: PRE/POST SURVEY KNOWLEDGE QUESTIONS

1. Immigrant children who have spent most of their lives in the United States can be deported against their will.

2. Undocumented immigrants pay many of the types of taxes that U.S. citizens pay.

3. Once immigrant children have lived in the United States for a certain period of time, they cannot be deported against their will to the country in which they were born.

4. Because the police don't ask about immigration issues, legal and undocumented immigrants are as free to report crimes to the police as citizens are.

5. By enrolling in the military, immigrants are automatically guaranteed the right to American citizenship.

6. Immigrants are guaranteed the right to obtain an attorney who can fight for them.

7. A minor offense like shoplifting or spray painting walls is treated much more severely for immigrants than for citizens and can result in detention and/or deportation.

8. Immigrants harm the economy by taking jobs away from citizens and by not paying taxes.

9. Once they are detained, the government can move immigrants to other detention centers without notifying their families.

10. Like all U.S. citizens who are prisoners, immigrants have access to an attorney to argue for them while they are in detention.

11. Legal and undocumented immigrants have to be cautious about reporting crimes that they witness because they might get detained or deported.

12. The U.S. allows the majority of asylum seekers to stay in the country.

13. All immigrants should have access to due process and a fair day in court.

14. Immigrants and U.S. citizens should have the same human rights.

APPENDIX B: MATCHED CASE OPEN-ENDED RESPONSES

i m playing for Greece. i realised that it is the same story in every country of the world

It opened my eyes to the "internal unaccountability" of the Immigration Service.

because there is no reason to treat people in humanely just because they are not from the u.s. one of the united states of america

I got really scared by looking at the detention centers, thinking about the fact that just for a random thing, even by mistake, a person could be thrown into prison, lose his loved ones, and actually go home, home to his country of origin. Therefore, I also do not see how this game is to help immigrants other than to scare them. Maybe you learn a lot of "facts" about U.S. immigration laws and their treatment by the government or common opinion but that is about it. Are not there any organizations to help those immigrants? If so, not having mentioned those (should they exist), the game seems either to aim on scaring immigrants (because it also seems to be the point to see both realities: "restricted" mobility while "free" and a life of despair in prison. All of this makes the game look very biased. Also, why having a character who supposedly wants to study and make a career, while treating him like a gang member, asking him whether or not he wants to steal a car left on the street with its keys still in the ignition or shop-lift. I am volunteering for an intercultural center in Rome,Italy, which helps with Rome's immigration and integration problems. One of my colleagues thought we could use the game idea to train and HELP immigrants, but I guess we would have to change to content a lot. So instead of taking a moment to have a "Spike Lee"-experience, we want our immigrants to find a solution to their problems and worries. I hope this game is just for American kids to take away their prejudices against immigrants. I know a lot of American students here in Rome who all hold a lot of the myths presented in the game as facts. (Maybe I should not go to the States to build up a future if it can be destroyed so easily and forever. Especially, since my wife is from Colombia...)

It made me put myself in their shoes and made me realise certain things i hadn't known before.

Nice game! Very smart. I lived as an exchange student in the US years ago. It´s true that imigrante, legal or not, are treated like strangers. Maybe now that the US is getting real and realizing that they are not the owners and rulers of the world they could start to treat immigrants as they should be treated. Congrats to the develpers of this game!

I knew about how badly they are treated but I did not know that immigrants actually benefit the economy. More than I had thought at least.

The game allowed me to know much more details about living as an US immigrant (questions 7, 9, and 10).

The image of the US are the worst off all times. This game didn´t have to show a lot to convince me. I´m Brazilian and I fell like I´m citzen of the world because I´m the fourth generation of a italian family. At the present time a don´t have the minimun interest of going to the US. I used to have a great image of your

country, even admire you guys. Come on you can do better! I´m shure you can.

because If we send back to maxico all mexicans usa will be down end we 're living that so we need them end they need as.

Some illegal immigrants should not be given the same treatment that others deserve but overall the treatment of immigrants in the US is horrible. The fact that they can be taken into custody at almost any time, even for something they had done so long ago is unheard of. These treatments are no different than the way other US citizens are treated in other countries though, so its not completely fair to downgrade America in that sense. But I feel the thoughts of the creators, and the point they are trying to get across. The only real way is to either give everyone citizenship or allow no one to enter the country, and if they do illegally, they should be sent back without wasting money on jailing them on our soil.

I already knew a lot of this because a couple of my friends have been undocumented before. I didn't know that corporations made money off of prisoners though

*I knew the U.S.wasent telling the Truth about how Immagrants are treated, I had a feeling it was something ALOT WORSE. YOU OPENED MY EYES THANK YOU. THE U.S. NEEDS TO STOP WITH THEIR RASICT B.S. AND GROW UP AND STOP BEING A BUNCH OF HYPOCRITES...IM EMBARREST OF MY OWN COUNTY! YOU WILL NEVER HEAR ME SAY WE , WHEN I REFER TO THE U.S. FROM NOW ON ITS (THEY) I WONT EVEN PUT MYSELF IN THE SAME GROUP OF IDIOTS AS THE (AMERICAN) NO LONGER. IM MY OWN PERSON. IM AM VERY SORRY FOR WHAT MY COUNTY HAS DONE. I WISH I COULD DO SOMETHING TO GET THIER HEADS OUT OF THIER ASSES. BUT WHAT CAN I DO? = *(*** IM GLAD YOU MADE THE GAME! BLESSINGS*

It just not changed my attitude about the way immigrants are treated in the US because I already thought that it was unnaceptable! Immigrants shoudn't be treated like marginals. The US government should create programs to control better the number of ilegal immigrants in their country, but should think more about ways to make this presence in their country positive.

Yes it made me confused between immigrants and the illegal (criminal) trespassers in this country

In many instances illegal immigrants are treated unfairly and inhumanely, this is not justice. It seems there are many injustices occurring. From things I have read (news clips) some haneous crimes are committed by some illegal immigrants, this in turn reflects poorly on all illegal immigrants and some legal immigrants. Also some legal immigrants do not take the time to know the laws of our country which also makes it tougher for those who do (such as flying a mexican flag above the stars and stripes)-this disrespects us, our country, and thier fellow immigrants (who came here for a better life). I never knew for fact that private companies were making billions of dollars to keep the system just the way it is so they can make billions in profits. Thank you the game was very educational for me.

It did because being born in the U.S i never realized how many things immigrants pass thru every day. I didn't know many of the things the game thought me. Now i tell my friends about this game and try to

spread the word of this game.

Made me more aware

Even if they try and help others they can still be caught and deported. It almost seems like they can't do anything here, whether it's wrong or right.

Easy game, but make me think why I'm here. The government try to deport as much is it can and I can't do nothing. Thank you 4 this game and those informations.

I did not realize there were so many things that immigrants ahd to deal with/ be cautious of while living their lives day by day. I thought I knew many of the issues concerned with immigrants but I was mistaken. Although I still think immigrants should not have as much legal help as legal citizens becuase they arent legal so they shouldnt have that right. Legal immigrants certainly should though.

I already had a fairly progressive attitude about immigration, but the game was a good illustration of the difficulties.

I learned that an immigrant can be deported based on a crime they committed and already served time for. This is bullshit. However, undocumented immigrants still don't pay income tax and take jobs away for the working class (yes, prices would go up as wages become competitive for citizens and documented immigrants, but that's fair). I don't think there should be a limit to immigrants allowed in the US so that they can be documented, taxed, and not be exploited by unscrupulous employers.

All human beings are created equal.

Because I am an immigrant young man, who was brought here along with my brother when we were just babies. My third brother was lucky enough to be born in the U.S.

It's hard to be an immigrant today! This helped me see the world from a different perspective.

because now i know how dangerous it could be to just walking in the streets just going shopping.One minute your happy and the next you are found dead

yes because they are treated so bad i hate the americans but only the ones that want the immigrants to leave from this country because i am a immigrant too.

I support the immigration reform more after the game

It's simple, every single human person should be treated equally no matter what, Inmigrant, U.S. citizen,Afro-American. An example is, that, if someone is in a car accident and I seeing that the car it's

going to explod and I have the chance to save that person's life,I just do it, dont care what race that person is.

We want immigrants to behave like ghost in our society staying out of site, but at the same time we want to benefit from their work. If they come out the shadows, we feel threaten because some of them don't look, speak or behave like an ordinary "American citizen" (if there is such a thing.) Law makers very little understand the issue of immigration and most specifically illegal immigration. When a problem is not understood, it is very easy to draw faulty assumptions. Illegal Immigration does not start at the Southern Border. In fact, it starts in the developing countries from which undocumented immigrants come from. What are the causes of this exodus of families coming to the United States? The answer is simple, and it is clearly stated in the US Constitution "the pursued of happiness." This translates to the pursued to better economic opportunities, the pursued of giving better living conditions to your family. I doubt immigrants come to the US just for the single purpose to threaten American Values; such erroneous statements are made by politicians like Tom Tancredo. Rather than understanding the problem xenophobic politicians inject fear, and hatred to the American People. We most stop demonizing immigrants documented or undocumented, and let's fine a comprehensive solution and not an irrational one.

I thought that they are free to report crimes and that police will not deport them or turn them to Homeland Security or ICE. The treat they receive is a total violation to human rights. I can see how organizations protect better the animals than Immigrants. It is not fair.

There is always going to be obstacles to avoid immigrants happiness and wellfare

I was already aware that they are mistreated, but I didn't realize how harshly. However the game keeps pointing out how past crimes such as shop lifting or graffiti or drug use (which is the cause of one of your own character's problems) can be used against them. This isn't something that just happens to immigrants, although it is probably more prevalent and more noticeable. Also, if one simply does not do drugs, or does not steal, then they wouldn't get into trouble. So I have little sympathy for those like your character Anna. Ayesha's plight is similar to every American, except that she was treated far more harshly than a citizen would be for the same offenses (I am referring to the essay she wrote). Marc also falls into a trap that many young confused students or impoverished youth fall into; however I believe that the military's recruitment methods are another (large, and equally of note) issue entirely. By the way, in the level where you have to outrun and hide from the cops, a graphics glitch allowed me to hide off the map. I jumped a fence and wandered behind some buildings.

I am a supporter of immigration rights reform, but I found the game bias to the point that by then end of the game I no longer trusted the Facts being gives. I feel that this game also hurts the campaigns that many police precincts have to inform people that immigration enforcement is not one of their jobs, and that -everyone- should feel safe reporting crimes. Feel free to contact me, I am very interested in the field of educational games. ---Moses Kaber

Because I already believed that everyone - no matter their citizen status - should have equal rights and opportunities. But it did help me realize the situation that many immigrants are facing. The most intense was "the hole" - the ultimate feeling of helplessness, hopelessness, and loneliness. But man, you are not alone. We need to fight for our rights as humans together.

I think I answerd "correctly" already before playing the game, although I did learn a lot of new facts. The game does seem a bit one-sided though. What to answer is a bit obvious.

i'm mexican so i did not changed my attitude because i think they're treated so bad, and nobody makes nothing. the government should change all of their laws against the undocummented people in US.

I couldn't get the game to play.

Because i already felt this way and my story is the same as Javier. It probably helped me be more cautious and worried about doing anything wrong in society.

i already knew alot

Legal immigrants are welcome in this country.

Not really. Somewhat though. The game was obnoxiously boring. The graphics were terrible. The movements nearly made me hurl...but it didn't...I just got a really bad headache. The information on there was good although all the answers were common sense. The makers could have tried harder making this game. I initially downloaded it because my Spanish teacher gave us an article which reviewed the game. I thought it was interesting, but when I played it, I was severely disappointed. Game was easy and boring.

It's bias. Oh and the game sucked monkey balls.

I was already down with immigrant rights. Great game. I will use it in my US-Mexico Borderlands class. Gracias.

My opinion is pretty much the same... undecided, because really we're all "immigrants" except for the Native Americans. But then everything involved pretty much in making America was bad... stealing of land, cheating people, bringing disease, slavery and everything else. And it hasn't gotten much better... fuck the mexican's rights... what about the native americans that are in these ghettos in the middle of no where with bad schools and suck ass freedom, living in trailers and shit. So yeah everything that was in this game I pretty much already knew... the goverment just has to decide what makes an illegal and then crack down hard... and deporting is bullshit cause you can't get people right exactly to where they used to live.

The US government was built by killing Native Americans and enslaving Africans. Stomping on immigrant rights pails by comparison.

Propaganda....Immigrants are fine...Illegal Immigrants are just that....illegal. Millions have immigrated the legal way...including myself. It isn't fair to those of us who work HARD to obey the law!!!

I already understood the challenges experienced by immigrants in the country, as my father immigrated in

the early 1970s from the Philippines.

Because i know pretty this situation, half of my family lives in US and they often tell us the way they live affraid of inmigration and to be deported; i really hate this manhunting but there's nothing i cand do from here

cause if gov. knows me, they need 2 know U!

I don't thonk that playing will make anyone of the ones who causes this thinks against the immigrants to change, but it is a nice way to show the americans what happen with them and one day hope that it will cahnge.

This game has taken an extremely biased, anti-government stance. The "facts" reported are based on opinion and do not hold up to true statistics. It is unfortunate the creators of this game have chosen to ignore criminal statistics, true arrest and deportation figures and have instead perpetuated fear and mistrust.

I still do not want to have to press one for English.

I do not remember playing a game but I did do a long series of questions. We desperately need as many immigrants as the USA can absorb. Our country still has a low population density which gives us an ability to have our population grow and make our economy grow. Social Security needs new workers as the system went from 20 workers per retired citizen it is now 6 workers for each retired citizen. I think we should advertise that the USA desires good hardworking people and their defendants and also advertise that anyone with a serious felony crime history are not eligible to enter and that anyone caught entering illegally would be facing long term prison sentences. I think we should beef up the INS so they can process hundreds of thousands each year of immigrants for USA citizenship but at the same time become as tough as need be to stop illegal immigration-but only if both things happen. This way, the 99% of immigrants who are good decent people have easy access to USA citizenship and have no motivation to enter illegally. Any immigrant that decides they can only enter the USA illegally should be presumed to have a serious record of felony crimes. Any requirement for US military service would be same for all citizens, many immigrants may decide that joining the service is an excellent way to secure a federal job here. I have hired Mexicans, Ecuadorians, and some people from South America and my experience is they work very hard and are friendly. I could never figure out why so many of us hate others and also have no idea why so many peoples around the world hate US Americans.

Because I feel all people have the same God given rights no matter where they are from or where they are. Thank you, Tony

I feel that all people whether here legally or illegally should be treated equally the same as the US citizens as far as being punished with crimes. We citizens were once strangers in this land that migrated from other countries. All should be treated fairly. I thought this game gave me a better understanding as to how the immigrants are really treated, its almost sicking to think we treat people like this. Aren't we all human beings that deserve the best that life can give us, to support our families how we need to??

never played it. the thing wouldn't load in my computer. Sorry but I feel that if one comes over thew border illegally one deserves what one gets.

I will stand by my opinion that ILLEGAL immigrants should not be here in this country. Immigrants who do as they should and apply for american citizenship are more than welcome in my books, but to think that some random person from another country can just move here without citizenship really bugs me. ENGLISH should be the language that all have to learn if they plan on living here. I am so sick and tired of immigrants who speak zero english that I'm not even sure how to express it. Frustrated would be the easiest and least violent term.

While the issues of human and civil rights are very important, it still does not overshadow the idea that commiting even a misdemeanor as an illegal visitor should be prosecuted more severely. For example, ifyou see your kid in the back yard digging up your garden, you may ground him. If a complete stranger does it, you'd probably call the cops.Not to trivialize the issue, but these people are strangers in my backyard...

the game loaded too slowly

First of all, when "I" was detained in this game, it was because "I" did not follow the rules and report a change in my living situation. These rules are very similar to that of a parolee that is a U.S. citizen, they have to follow the laws. As an American citizen, I do not have a lawful right to commit a crime. The fact that ANY illegal immigrants are allowed to commit illegal entry & illegally reside in the U.S. for any length of time, is already giving them more leeway than an American citizen. I do not agree with detaining them, unless they committed a 2nd crime, if the sole crime committed was illegal entry & residence then I think they should be immediately deported to their country of citizenship. As far as children of illegal immigrants that live the majority of their lives here, I do not believe families should be split up... therefore, I believe the family should be deported together. I only wish that illegal immigrants wouldn't put their children in that situation in the first place. And, regarding taxes, the majority of the few tax-paying illegals make so little that they qualify for EIC (Earned Income Credit) and are refunded all taxes they paid in. On a personal note... when my father was a child, he and my grandmother did things the right way when they legally immigrated here from Mexico. I have a lot of respect for people who want to be an American citizen so strongly, that they respect our laws in order to do so.

Many of your statements of "fact" were blatant lies or half-truths. You basically played on the fears of both illegal immigrants and US citizens.

the truth is the truth; a game is a game.

I already had a clue about some issues.

While I learned a few new facts, I mostly played this game to check out how it would be as an educational tool for people who aren't interested in immigration rights (as I already am). I enjoyed the game, but it was fairly simplistic, and I think it'll have a hard time grabbing most people's attention for any great length of time- probably not even long enough to finish it. Also, there's a bug with the naturalization papers ending where the paper obscures everything else and won't go away. That's on a MacBook.

game is biased half truths are stated throughout

Your program, while an interesting concept, lacks many key precepts that might be necessary to make an actual fun game and comes off instead as a clunky effort to make a three-dimensional wandering situation. All of the "quiz" questions are telegraphed; I had only to ask myself "What is this question trying to imply?" and I recieved a perfect score. While I do not personally think that there should be completely open immigration, I agree with you guys 100% that immigrants who have come to this country, even illegally, deserve full human rights protection and reasonable accomodation if they are going to be incarcerated for any period of time. We should also, naturally, not deport people who have effectively been born here, simply because they fell out of their mother a few months before their mother came here. You might, frankly, have more success getting your message across by writing a more complex, even engaging story and producing a simpler but more graphically appealing game to go with it. Something like Chu Chu Rocket with a long-term storyline perhaps, where you get the same "avoid the Migra!" gameplay.

I'm a legal services immigration attorney. Preaching to the converted.

This is game attempts to make it help change the mind of people against illegal immigrants. If you are illegally here you shouldn't be sheltered under any circumstances.

because i was aware of all of these issues already

I am an immigrant myself. My attitude towards LEGAL immigrants is different than my attitude towards ILLEGAL immigrants. I welcome legal immigrants. Illegal immigrants need to get out, much like unwanted houseguests. I don't care what country they are from, illegals are illegal.

Because we are an immigration law office and I know how ICE treats immigrants. They are not offered an attorney to represent them. They must with limited access, arrange their family to hire an attorney. They are intimidated by agents to sign and leave and are not told that they may have rights if they hire an attorney. Border Patrol and ICE agents lie, insert fear and intimidate. Everything we hear in the media is false or fabricated. How can this country deport 12 million illegals who usually pay taxes? How is Social Security going to meet their obligations if they do not recognize illegals contributions. Most employers do not exploit. They pay good wages. A person running for President must make immigration part of our economical independence and growth of our economy. We need those workers. No one else will do those jobs. If I killed someone, I would have my time in court. These people are not even afforded the basics of human rights and decency. Obama is a racist, and most of our talk show hosts are racists. There is no room or acceptance in this country for racists.

This game totally distorts the legal process. I played as Suki. First, you claim that ICE justs runs around town arresting everyone. This is completely false. Even if the did ask Suki about his immigration status, he could always refuse to talk to ICE without a warrant. Second, your concept of a detention center is completely wrong. For low priority aliens, like Suki, they would be placed in barracks, not pods. There would be no right to just walk around the yard. I even saw a female detainee with the men. Thid, He goes to his Master Hearing with the IJ and gets a removal order. He could have claimed asylum and bonded out or at least have asked for voluntary departure. Finally, you advocate that immigrants should fear the police. This is morally and ethically wrong. While I cannot attest for the entire United States, police in my hometown are happy to assist immigrants and often sign U visa affidavits on their behalf. If an illegal immigrant rape-victim came to me, I would tell her to go to the police, cooperate, testify, and get a U visa without hesitation. I would like to hear your thoughts on this: mtp@mail.utexas.edu

I already had this view. I do hope for a Bill allowing more illegals to become citizens.

I already knew how badly the US treated immigrants (even though we the US are all where all immigrants at one time) and we actually took this land from the indians, but back to the original question I believe we the US need to allow the immigrants to become citizens and some of the hardest workers are immigrants trying to become citizens or just staying out of trouble by not drawling attention to themselves but we have too many conservitives in our goverment and I don't see that happening anytime soon,I really do feel for these immigrants that have had to go thru all this and hope they don't think that every American is ignorant but the reason I played was to learn more facts about just how terribly the US treats and takes advantage of these hard workers.

game will not download properly.

not famale