

Stephen Yezukevich, Daniel Mello, Eliel Mares
CIS 362 - Empirical Methods for CS
Prof. Iren Valova
4/20/2020

Intergenerational Social Skills and Social Media Usage

Abstract

The purpose of our case study was to determine if social media has an influence on the formation of social skills. We created three sets of social skill questions and sent them to a focus group of 32 participants over the course of 2 weeks, with eight individuals representative of the following generational brackets: Baby Boomer, Gen X, Millennial, and Gen Z. We created these questions to determine an individual's likelihood to exhibit a particular social skill, which we divided into 2 categories. These categories were “Physical Social Skills”, or social skills most applicable to face-face interactions, and “Internet Social Skills” which are most applicable to online communications. Our findings suggest that Baby Boomers are more confrontational and direct than all other generations, and severely inept in Internet Social Skills. Our data also suggests that Gen X are adept in empathy, but also severely lacking in Internet Social Skills. Both Millennials and Gen Z are increasingly adept in expressing Internet Social Skills, with empathy remaining the highest Physical Social Skill between both generations. Thus, the data would indicate that early exposure to social media makes an individual more adept in expressing Internet Social Skills while producing no increase in any category of Physical Social Skill.

Introduction

The focus of our case study is to explore the presence of intergenerational social skills within the context of in-person and online interactions. We assume that the prolonged presence and usage of social media in an individual's life affects the development of their social skills. What is unclear to us is exactly which social skills are affected, and to what extent. All subsequent research is conducted with the aim of answering our research questions: which social skills do different generations show the greatest aptitude towards expressing? Which social skills are most developed as a result of early exposure to social media?

The social media behavior of individuals comprising separate generational brackets is something that has been studied by other researchers in the past. Research indicates that individuals born before 1980 have a greater tendency to use discussion-based platforms like Twitter, citing the ease of being able to share news and/or political opinions, while younger generations are more concerned about staying in touch with friends and are thus more likely to use alternative platforms [1]. The motives of separate generational brackets with regard to social media usage is not the primary focus of this case study, although we do believe it to be an important factor in determining the social skills exhibited by these groups. Rather, our focus is to study the varying responses of individuals belonging to different generational groups when presented with identical social conflicts (both in-person and online).

After conducting research on how to define which social skills we should be studying, we discovered Lewis Goldberg's O.C.E.A.N. Model for Personality (a.k.a. The “Big Five” Personality Model), which defines an individual's personality in terms of gradient comprising 5 characteristics:

openness to experience, conscientiousness, extroversion, agreeableness, and neuroticism[2]. We used Goldberg's model as a frame of reference when formulating which social skills we would be measuring amongst our sample. We defined "social skills" as 2 discrete categories. "Physical Social Skills" correspond to those social skills which are most applicable to face-to-face interactions between individuals. These include "Directness", "Empathy", and "Meaningful Discussion". "Internet Social Skills" corresponds to those social skills most applicable to an online context, where communication happens faster and more frequently amongst larger groups of individuals. These include "Precise Communication", "Idiom Comprehension", and "Cultural Literacy". Our units of analysis are "generations", which are defined within the context of our case study as "Baby Boomers (53+ yrs.)", "Gen X (36-52 yrs.)", "Millennials (23-35 yrs.)", and "Gen Z (18-22 yrs.)".

Methodology

Our case study's design was based on causal principles, as we sought to explore the causal relationship between social media usage since birth and the development of social skills. Our data collection instrument was Google Forms. Through Google Forms, we developed a series of three questionnaires that would be administered to a chosen focus group throughout the course of a week. Our focus group consisted of 32 individuals, eight from each separate generational bracket ($n=32$). This sample of individuals was derived from a sample frame of all individuals who use social media (a category that encompasses all generational brackets). We planned to aggregate the data provided from each questionnaire in such a way that we could analyze each generation's response to the same questions.

We then went about designing a questionnaire that would gauge an individual's tendency towards expressing each of the six social skills. When designing our questionnaire, we decided to engage the participants' Physical Social Skills by designing hypothetical situations in which an individual's response would represent their aptitude towards expressing a particular social skill. The three Physical Social Skills are "Directness" or an individual's ability to directly engage with another person in face-to-face conversation, "Empathy" or an individual's ability to sympathize with and understand the feelings of another, and "Meaningful Discussion" or an individual's ability to hold an in-depth discussion with a stranger. There are no wrong answers to each Physical Social Skill question. Rather, we're assigning a point value to each response based on how much it directly correlates with the social skill being measured (0 points for the least-correlated response, 3 points for the most-correlated response). The maximum number of points that an individual could score for a particular social skill is 9 points over the course of three questionnaires, making the maximum score that an entire generation could receive for a particular social skill 72 (9 multiplied by 8 participants belonging to a generation). We then divided the number of points accumulated by the maximum achievable score, leaving us with a percentage by which we could measure a generation's tendency towards expressing a particular social skill.

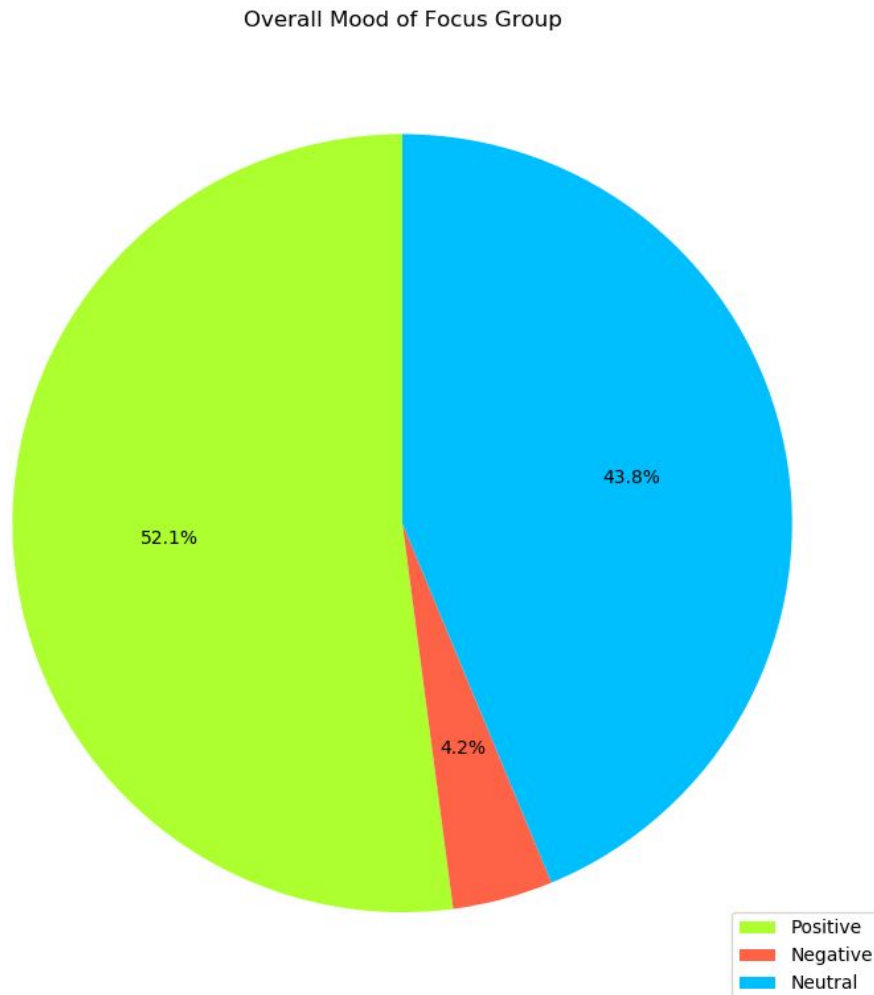
The three "Internet Social Skills" were defined as such: "Precise Communication" or an individual's ability to communicate succinctly through abbreviated language, "Idiom Comprehension" or an individual's ability to comprehend concepts through novel expressions, and "Cultural Literacy" or an individual's fluency and ability to participate in online culture. The process of determining a generation's tendency towards expressing any of the three "Internet Social Skills" was similar, but with one major difference. Rather than designing the questions in such a way that there are no wrong answers, the nature of these questions demands that there be one objectively right answer. This is due to the fact that each

question gauges an individual's familiarity with a particular cultural aspect (they either know the reference, or they don't). We categorized the responses to these questions into 3 groups: "correct", "incorrect", and "I don't know". The number of responses within each category of response was tallied (the total number of responses for each Internet Social Skill is 24; 8 responses per generation).

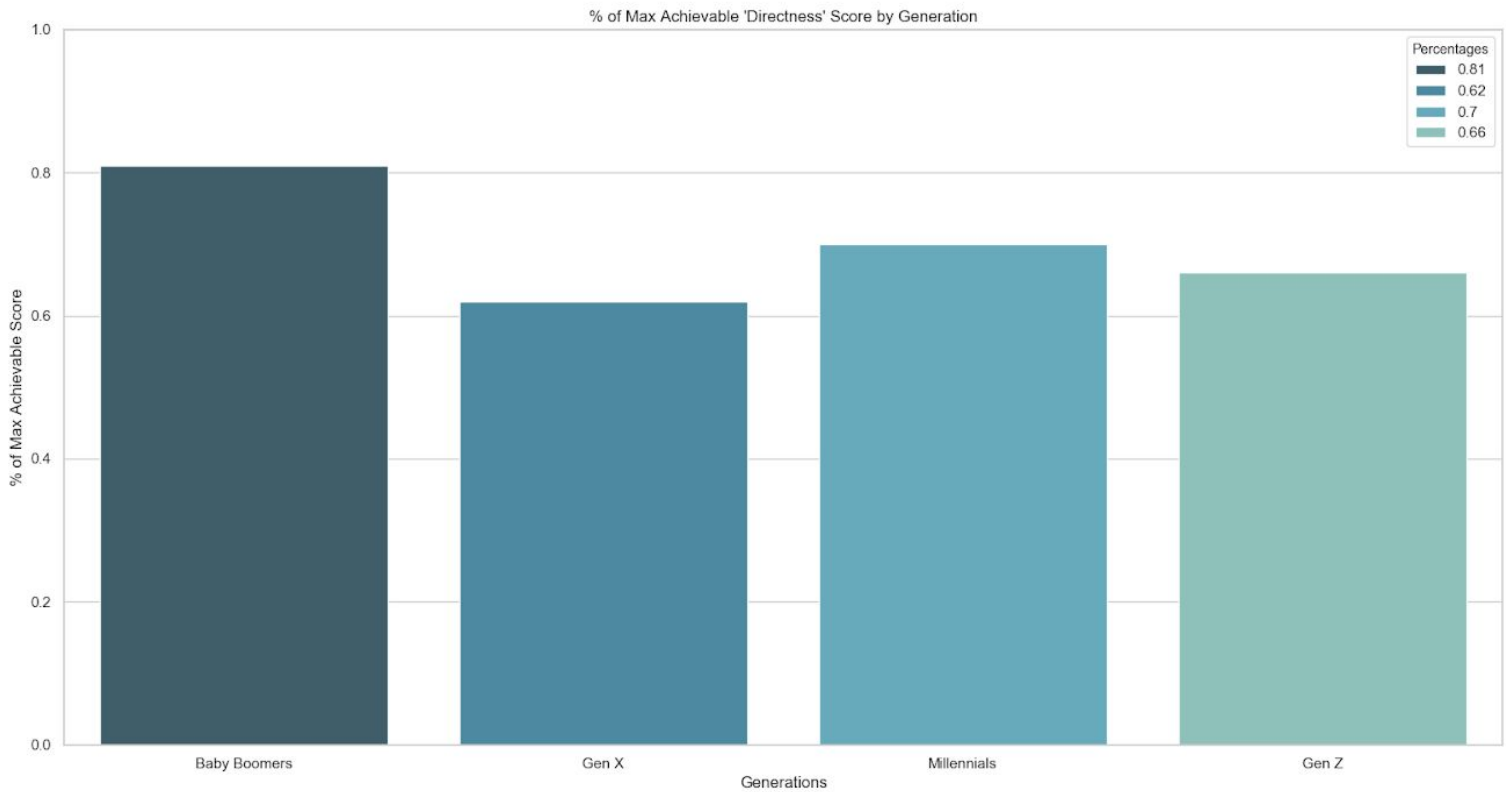
The method of dissemination for our questionnaire had a few particulars. After selecting our focus group, we decided that we would send the link to each questionnaire out between 3PM-5PM on the days which they were scheduled to be released. In doing this, we could ensure that each individual had an opportunity to go through their day and amply expose themselves to social media before answering our questionnaire. An individual's mood on a given day was also of concern to us, as we knew that may potentially affect how they go about responding to a hypothetical social conflict. This was something that we made sure to ask as part of our questionnaire so as to determine and account for any potential bias in the answers we received.

Data

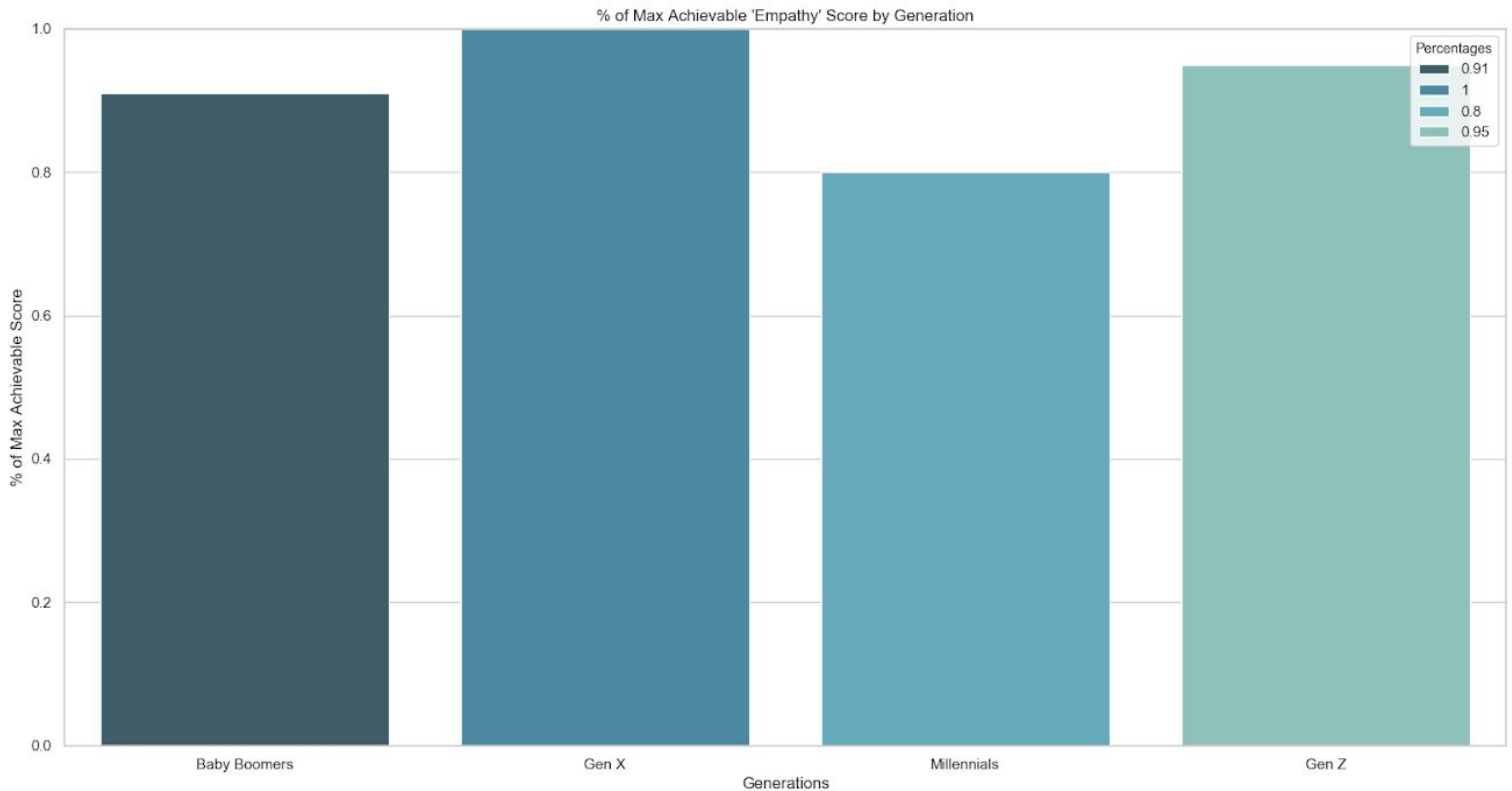
Fig. 0 - Mood Graph



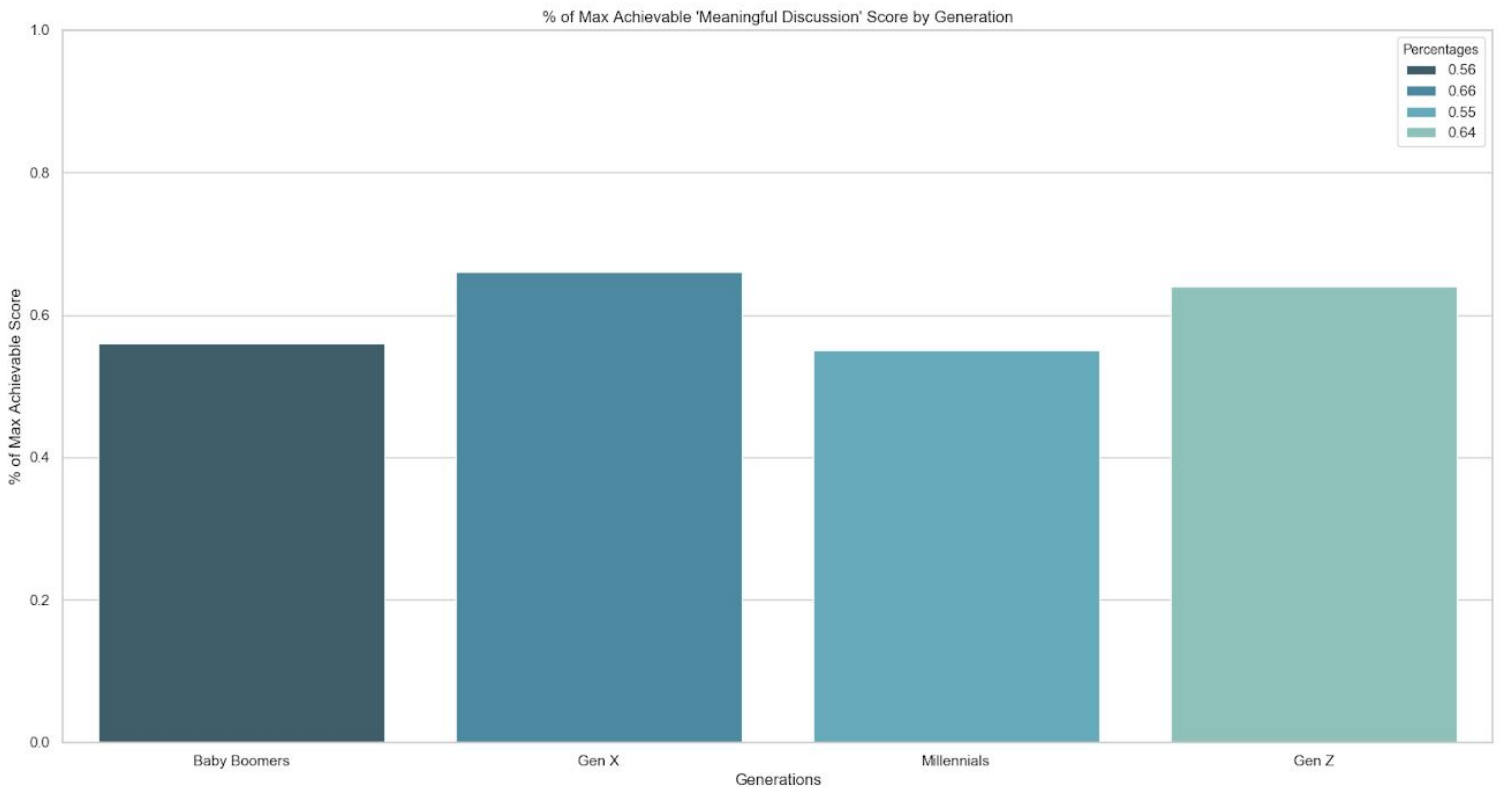
In order to determine the reliability of our data, we felt as though a person's current mood would affect the expression of a particular social skill (ex: a person in a negative mood might have less Meaningful Discussions on a given day). To gauge the accuracy of our data, we asked our participants what mood they were in at the time of taking our questionnaires. The graph shows that a majority of people in our focus group were either in a good or neutral mood throughout the time period in which we administered our questionnaires. Thus, we can conclude that the likelihood of an individual's mood affecting their responses and skewing our data is low.

Fig. 1 - “Directness” Score Per Generation

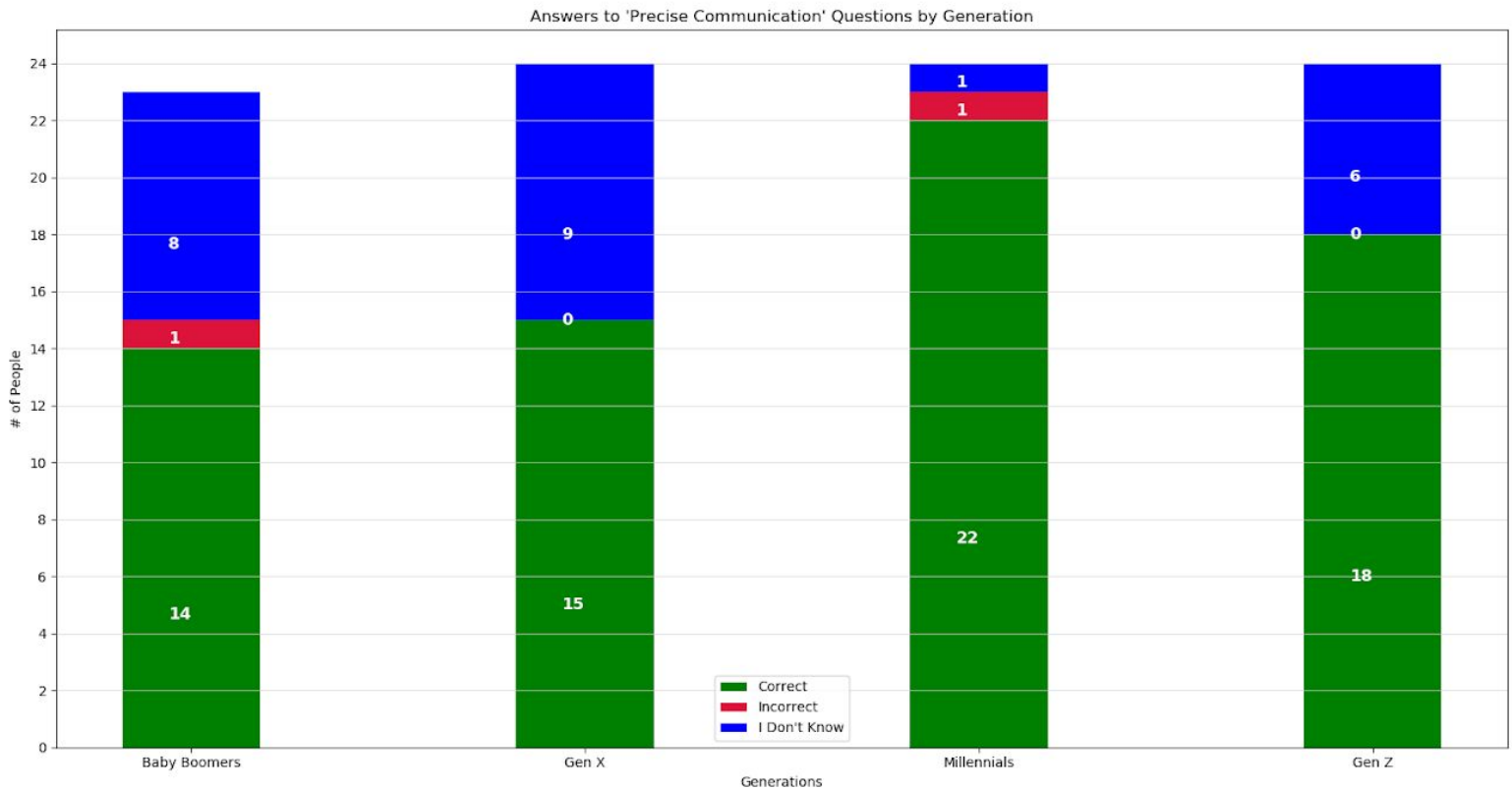
The first Physical Social Skill we wanted to analyze was an individual’s “Directness”, or ability to be confrontational in their actions (not necessarily in an aggressive manner). In these questions, the individuals were presented with a problem and each answer was an action the individual could take that varied in its degree of “Directness”. The graph shown above represents the percent of how many points out of the maximum amount of achievable points each generation scored (out of 72). Boomers received the largest score of 81%. This shows that Baby Boomers have the highest tendency to be direct with their face-to-face interactions with other individuals. Millennials and Gen Z scores are approximately the same, standing at 62% and 68% respectively. This suggests that either generation has a lesser tendency to be direct in their actions in comparison to Baby Boomers. Gen X received a score of only 62%. This is the lowest score for “Directness”, and suggests that Gen X is the most likely of the four generations to avoid direct interactions if given the opportunity.

Fig. 2 - “Empathy” Score Per Generation

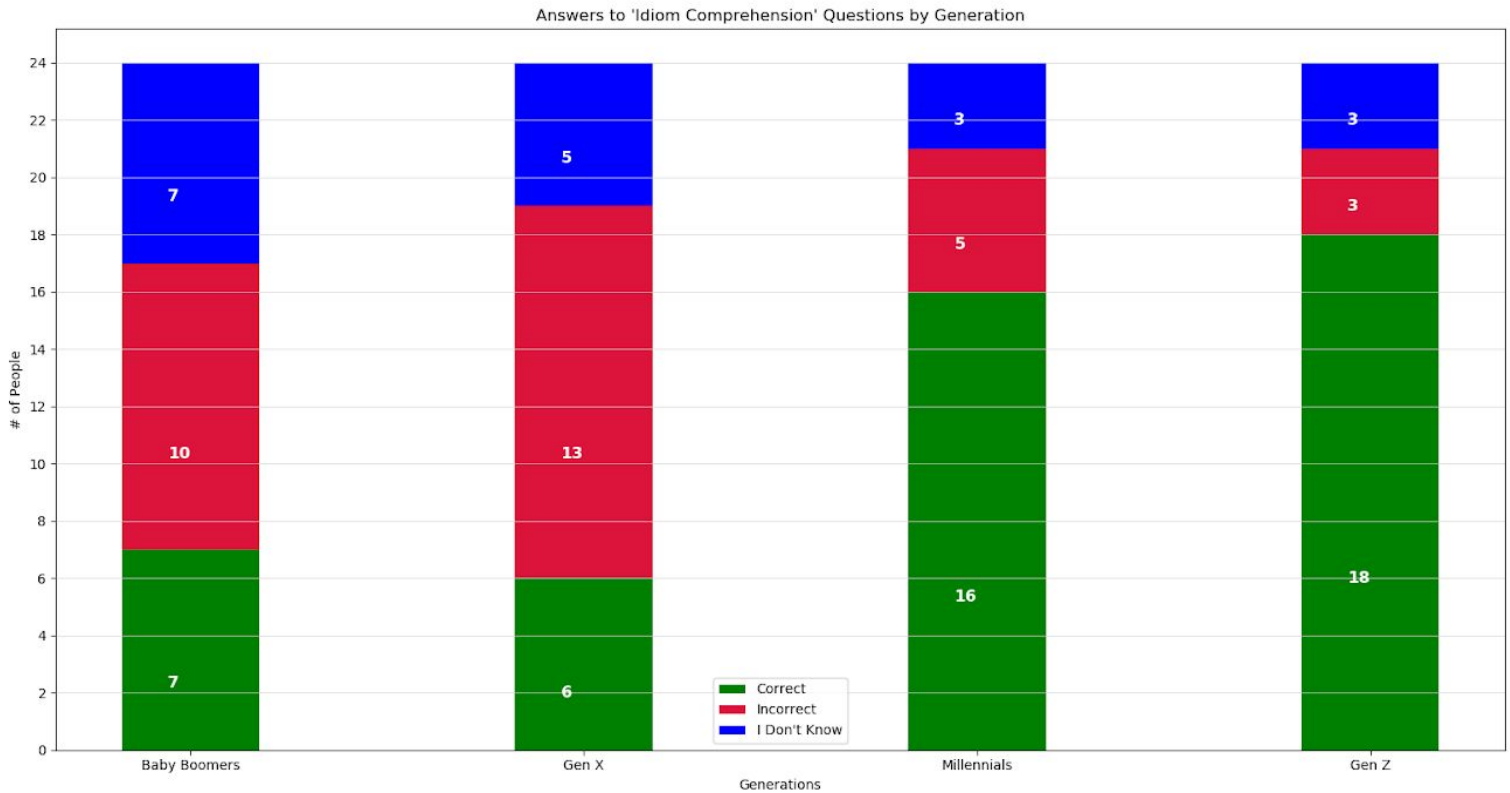
The second social skill we wanted to gauge was “Empathy”. We categorized Empathy as a Physical Social Skill because we felt as though the impersonal nature of the internet makes it more likely that an individual would express Empathy in face-to-face interactions with another person. The hypothetical situations present in these questions concern interactions with strangers/co-workers as opposed to friends or family. We made this decision so as to eliminate potential bias on part of our focus groups’ answers (as most individuals are inclined to act empathetic towards those they are close to). The scores recorded were some of the highest numbers in our research, with a minimum of 80% and a maximum of 100%. The column with the lowest percentage are Millennials who only received a score of 80%. The data would suggest that Millennials are the least empathetic of the 4 generations towards their peers. Gen X achieved the highest possible Empathy score, receiving 100%, thus indicating that they are the most empathetic of the 4 generations studied.

Fig. 3 - “Meaningful Discussion” Score Per Generation

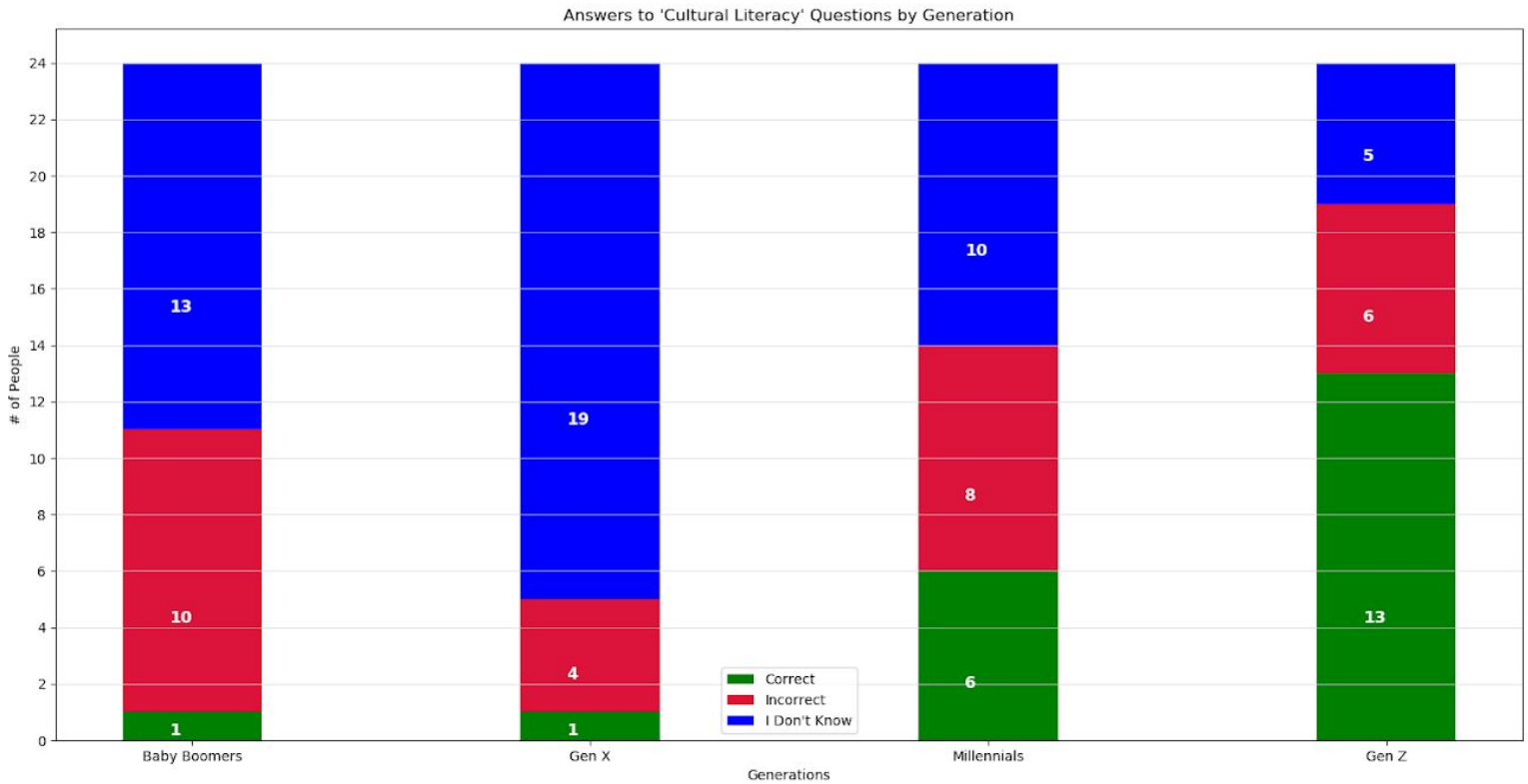
The final Physical Social Skill we wanted to determine was the ability to hold “Meaningful Discussions” with strangers. We chose to call “Meaningful Discussions” a Physical Social Skill because we felt the ability to express “Meaningful Discussions” would persist harder when conversing with an individual, over clicking articles on the internet. These questions were designed less upon the individual interacting with a person and more designed towards the individual's ability to feel open and engaged when in discussion with new and unfamiliar topics. These scores are generally the lowest scores in our case study. The range of “Meaningful Discussions” scores are the lowest with 55% held by Millennials and the highest score of 66% which is held by Gen X. The data would suggest that Gen X has the most “Meaningful Discussions” and Millennials do not. Although major claims cannot be made because each generation's scores are close together.

Fig. 4 - “Precise Communication” Responses Per Generation

The first “Internet Social Skill” we wanted to determine was an individual’s ability to communicate succinctly through abbreviated language. When creating these questions, we chose a set of abbreviations we felt were omnipresent enough so as to create the least amount of confusion amongst even the least tech-savvy individuals in our focus group (ex: TTYL, HMU, LOL, etc.). Millennials were the generation with the most correct answers of 22, followed by Gen Z with 18, and Gen X/Baby Boomers with 15 and 14 respectively. Contrary to our expectations, Gen Z did not receive the most correct answers and was superseded by Millennials. Baby Boomers and Gen X were also the most likely to admit their ignorance of an abbreviation's meaning. Regardless of any “Incorrect” or “I Don’t Know” responses, our data seems to indicate that every generation, generally speaking, has a solid grasp of Precise Communication through digital media using abbreviated language.

Fig. 5 - “Idiom Comprehension” Responses Per Generation

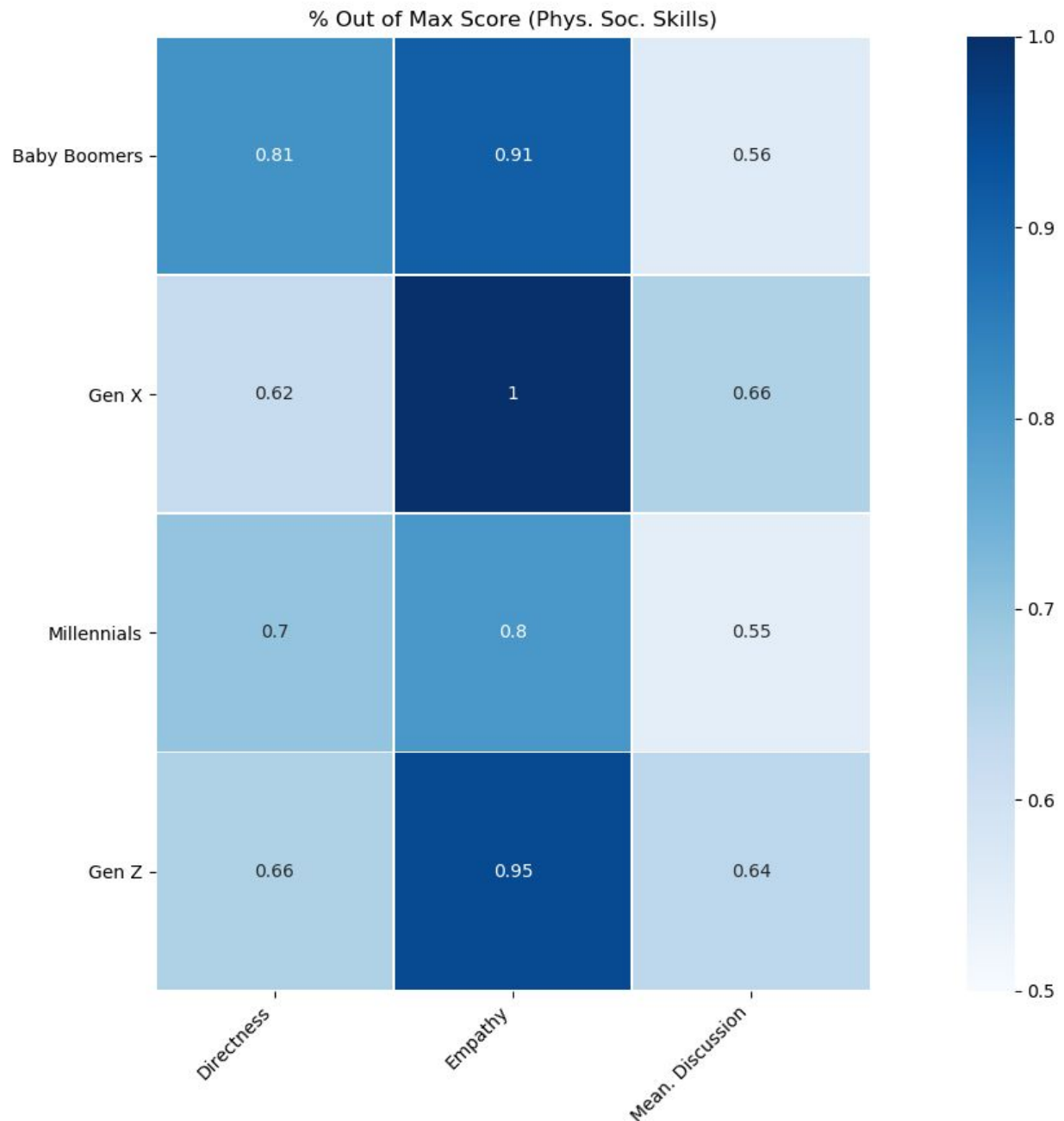
For our second Internet Social Skill, we wanted to determine an individual's ability to comprehend concepts through novel expressions (“novel expression” being synonymous with “slang”). When creating these questions, we chose a set of contemporary expressions we determined to be well-known by avid users of the internet. Gen Z received the most correct answers of 18 followed by Millennials who received 16 correct answers. This data fell in-line with our initial predictions, as we expected younger generations to be able to correctly identify the meanings of our selected idioms (“yeet”, “no cap”, “salty”, etc.). Baby Boomers and Gen X have 7 and 6 correct answers respectively. What surprised us the most about this dataset was the number of incorrect answers received from both Gen X and the Baby Boomers. Given an expression where the meaning can’t be derived from the expression itself and exists solely within a cultural context, an individual should either be able to correctly identify it's meaning or claim that they do not know. Instead, we received many incorrect answers. This willingness to guess the meaning instead of claiming ignorance may be indicative of a sense of curiosity, and willingness to learn and engage with the use of such expressions.

Fig. 6 - “Cultural Literacy” Responses Per Generation

For the last Internet Social Skill, we wanted to determine an individual's fluency and ability to participate in online culture. We decided that the most accurate way of gauging this in an individual would be to determine their familiarity with various online memes/viral videos. We selected 3 references to online culture from 3 different online platforms: one from Reddit, one from Vine, and one from Tik Tok. The references we chose were all popular and easily recognizable among users of their respective platforms, with much potential for crossover recognition due to their viral nature. Questions of this nature received the most “I Don't Know” responses than the other two, and had an even lower number of correct answers as well. Baby Boomers and Gen X only received 1 correct answer each and Millennials had only 6. Gen Z had the largest number of correct answers of 13. As expected by our researches, the Cultural Literacy of each generation rose as their exposure to social media happened at a younger age (with the exception of Gen X, who were approximately in their 20s by the time the internet was made available for public use).

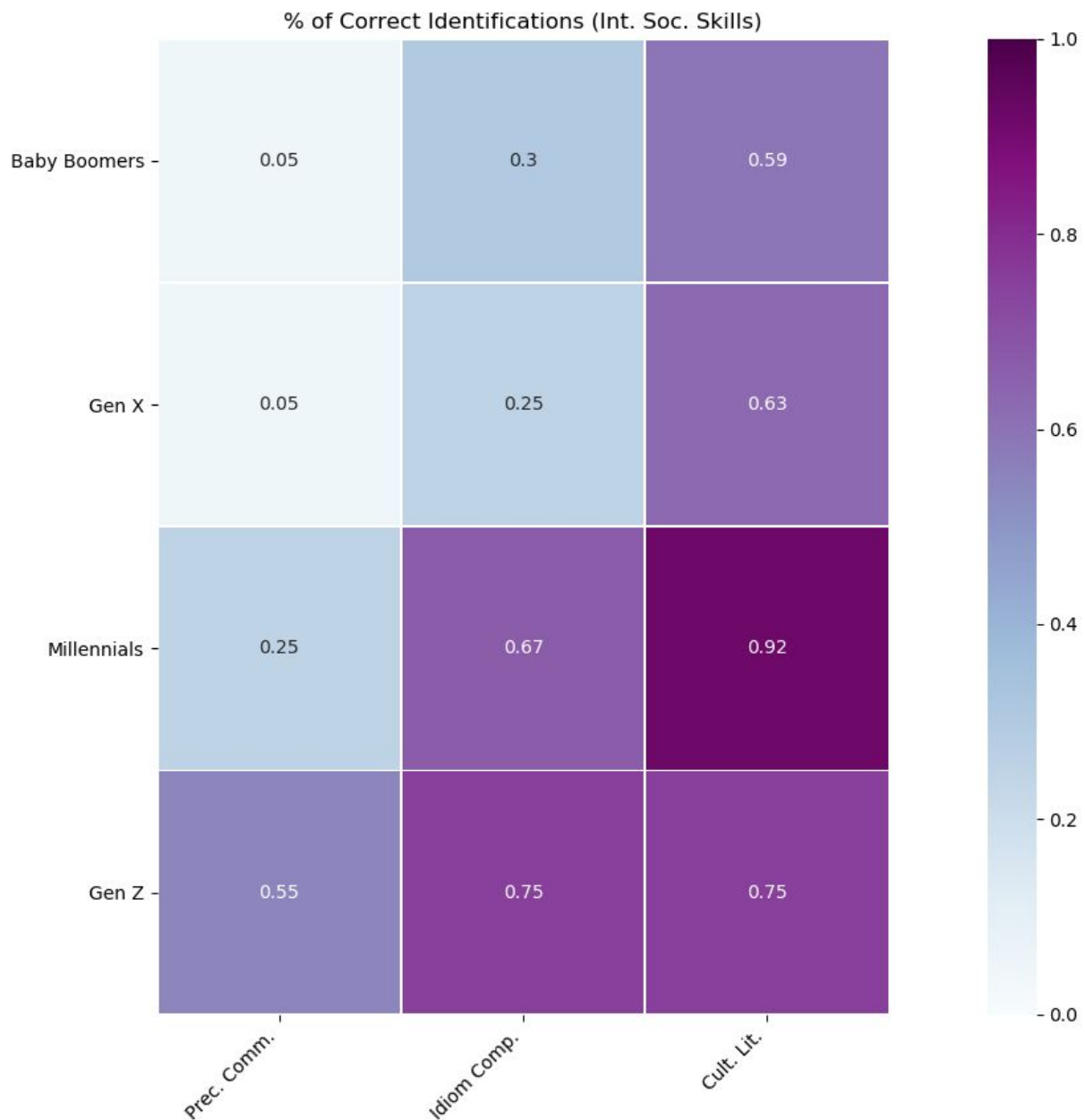
Results

Fig. 7 - % of Max Score Achieved per Generation (Physical Social Skills)



The above heatmap represents the percent of points scored out of the maximum achievable amount of points for each Physical Social Skill. The data was derived from the quotient of dividing the number of points a particular generation scored in a category by the maximum number of points a generation could have earned (72). Since no generation scored below 50% in any category, the graph was scaled to fit a range of .5-1, making it easier to observe any minute differences in data between each category. For the scores of Physical Social Skills, Baby Boomers received two of the higher scores and

one of the lowest scores when compared to the other generations. Boomers scored 81% and 91% in Directness and Empathy respectively. This shows that Baby Boomers are more confrontational and empathetic towards their peers. Boomers scored a 56% in Meaningful Discussion, thus indicating that like Millennials (who received only 55%) are amongst the least likely of the 4 generations to feel engaged during a conversation with their peers. Gen X received the lowest score of 62% in Directness and the highest scores in Empathy and Meaningful Discussion of 100% and 66% respectively. The data would suggest that people belonging to Gen X are less likely to directly engage someone, but are more likely to feel empathy and hold meaningful discussions with the people they are not personally familiar with. Millennials received the lowest scores in Empathy and Meaningful Discussion when compared to the other generations. When compared to the other generations, Millennials received the second-largest score in Directness of 70%. This would suggest that Millennials are confrontational people, albeit less than Baby Boomers. Since they hold an 80% for Empathy and 55% for Meaningful Discussion, this would suggest that Millennials are less likely to feel empathetic towards their peers as well as feel engaged when they are conversing. Gen Z received one of the lower scores in Directness by only receiving 66%. Gen Z also received one of the higher scores in Empathy and Meaningful Discussion of 95% and 64% respectively. This data would suggest that Gen Z are more likely to feel engaged and open when situations arise as well as feel more empathetic towards their peers. The data also indicates that Gen Z is less likely to directly converse with their peers. There seems to be no observable pattern in terms of a given Physical Social Skill continually increasing or decreasing as an individual's exposure to social media happens at a younger age. Thus, it may be possible that there are other factors that contribute to the development of such in-person social skills.

Fig. 8 - % of Correct Identifications per Generation (Internet Social Skills)

The above heat map represents the percent of correct identifications that each generation received when prompted to answer each Internet Social Skill question. Each percentage was derived from dividing the number of correct identifications in each category by the total number of correct identifications possible (24). When compared to the other generations, Baby Boomers received the lowest score of about 5% in Precise Communications showing that Baby Boomers do not understand common abbreviations used in digital media. Regarding Idiom Comprehension, Baby Boomers received the second to lowest score of only 30%, and the lowest score in Cultural Literacy with 59%. The data would suggest that Baby Boomers do not strongly grasp aspects of Internet Social Skills, as overall they received the lowest scores in each category out of all generations. Gen X also received a few low scores as well. Gen X and Baby Boomers are tied for the lowest score in Precise Communications of only 5%. Gen X also received the

lowest score in Idiom Comprehension by only understanding 25% of the references made. In Cultural Literacy, Gen X understood 63% of the references made. Since Gen X received some of the lower scores in regards to Internet Social Skills, we can say that individuals belonging to this generation do not fully grasp Internet Social Skills. Millennials received the largest score in Cultural Literacy with 92%. This shows that when it comes to understanding internet culture, Millennials are the most reliable. Millennials scored a 25% with regards to Precise Communications. This is a relatively low score but it is the second largest score when compared to the other generations. Millennials also scored a 67% in Idiom Comprehension. Millennials have a firm understanding of these Internet Social Skills. Gen Z received some of the highest scores in our Internet Social Skill questions. They received a score of 55% in Precise Communications, and a score of 75% in both Idiom Comprehension and Cultural Literacy. Given this data, we can confidently say that the earlier an individual is exposed to social media, the more apt they are in expression of the aforementioned Internet Social Skills.

Conclusion

After all questionnaires had been submitted, we began the process of organizing the data contributed from each generational bracket. The purpose of our case study was to explore the presence of intergenerational social skills within the context of in-person and online interactions. We wanted to determine if the prolonged presence and usage of social media in an individual's life affects the development of their social skills. After analysing our data, we have determined that Baby Boomers are the most apt at expressing Physical Social Skills, particularly with regard to Directness, but are lacking in every Internet Social Skills category. Gen X exhibits the highest Empathy and Meaningful Discussion values, but lack in Internet Social Skills to the same degree as Baby Boomers. Millennials exhibit Empathy and Directness, but to a lesser degree than Baby Boomers. And finally, Gen Z exhibits the second-highest Empathy score (.95) when compared to Baby Boomers, who had a perfect score of 1.

Since neither Baby Boomers or Gen X were exposed to social media at a young age, Millennials and Gen Z show a significant uptick in the expression of Internet Social Skills, earning the highest and second-highest scores in every category. In contrast to the Physical Social Skill Data, this data clearly indicated a trend taking place, where the younger an individual became, the higher their scores became in every Internet Social Skills category. Thus we can confidently say that an individual will exhibit stronger Internet Social Skills as they are exposed to social media at a younger age. Other research indicates that individuals who lack self-presentational skill (Physical Social Skills) are more likely to prefer online social interaction over face-to-face communication[3]. Given this information, we can hypothesize that as individuals become exposed to social media at a younger and younger age, they will experience a continued degradation of in-person social skills. Exactly which social skills will be affected remains unclear at this time.

References

- [1] K. J. Fietkiewicz, E. Lins, K. S. Baran and W. G. Stock, "Inter-Generational Comparison of Social Media Use: Investigating the Online Behavior of Different Generational Cohorts," *2016 49th Hawaii International Conference on System Sciences (HICSS)*, Koloa, HI, 2016, pp. 3829-3838.
- [2] "Big Five Personality Traits: The OCEAN Model Explained [2019 Upd.]." PositivePsychology.com, 10 Apr. 2020, positivepsychology.com/big-five-personality-theory/.
- [3] Caplan, and Scott E. "Social Skill Account of Problematic Internet Use." OUP Academic, Oxford University Press, 6 Feb. 2006, academic.oup.com/joc/article-abstract/55/4/721/4103034.