
Engaging Engineering and Information Systems Students in Advocacy for Individuals with Disabilities through a Disability Film Media Project

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Abstract

College curricula of engineering and information systems do not afford frequent engagement with individuals with disabilities. The authors of this research study analyzed the benefits of disability films for a community film festival of largely engineering and information systems students and individuals with developmental and intellectual disabilities. The authors learned that disability film media enables discernable engagement and advocacy of the students for the rights of individuals with disabilities. The authors also learned that the disability film media facilitates engagement and self-advocacy of the individuals for themselves. This study will be beneficial to instructors in engineering and information systems, and instructors in liberal arts, evaluating film media as an exciting method for involving students with individuals with disabilities on multidisciplinary projects of public service.

Keywords: community engagement, engineering and information systems curricula, disability film media, disabilities, multidisciplinary projects, public service.

1. BACKGROUND OF PAPER

"Disability is a natural part of life ... it is the barriers that [others without disabilities] erect that are the problem ... and it is time [the] media reflected this truth" (Levine, 2013).

Disability can be an alarming and even "frightening" consideration (Ross, 2013, p.1) for a college student without a disability. Disability covers different developmental and intellectual, physical, psychological, sensory and social impairments. Estimates denote a dimension of 49-54 million individuals with disabilities in this

country (Riley II, 2005, p.15) – 19% of the population (United States Department of Commerce, 2008). Estimates denote a higher 650 million individuals with disabilities globally (International Labor Organization, 2013). The civil rights of individuals with disabilities in this country are covered in the Americans with Disabilities Act of 1990 (Riley II, 2005, p.7), but crime (Harrell, 2014) and discrimination if not disempowerment (Willis, 2012) is experienced frequently by them. 2012. The perception of others without disabilities of individuals with developmental and intellectual disabilities as persons of potential is flavored by fear, focus on impairments and prejudice (European Commission, 2013, p.21), inevitably precluding them as contributors in fruitful positions in industry. This perception may be dissipated by the impact of film industry media representation of them as a diverse population. The reality is that the influence of mainstream film media is of marginalization - misrepresentation and underrepresentation - of individuals with disabilities in society.

The misrepresentation of individuals with disabilities in mainstream film media is clear if they are defined by identifiable impairments distanced from individuals or students without disabilities (Disability Planet, 2013, p.3). Inherent in the misrepresentation of individuals with developmental and intellectual disabilities is that they are devoid frequently of intricate but normal personalities as people distinct from other people or students in a social setting (Disability Planet, 2013, p.2). The limiting media notion of individuals with disabilities is a factor in negative perception of them. The perception may even be of pity, victimization or vulnerability (Special Olympics, 2013). Their underrepresentation in mainstream film media is manifest in the often representation of them by individuals without disabilities (Norden, 1994), further perpetuating misrepresentations of reality (National Institute for Disability and Rehabilitation, 2002, p.41).

This misrepresentation in mainstream media is evident in a history of misleading portrayals. For example, in the original *The Phantom of the Opera*, the phantom is negatively portrayed through his disability as a freak, not as a human through his mobility as a person, effectively isolating him from society. In the recent *I Am Sam*, Sam is negatively portrayed through his disability as an oddity and a problem for society, but is concurrently portrayed positively through his parenting sensitivity (Nelson, 2001), a dual

portrayal, although he is still isolated from mainstream society. Though individuals with intellectual disabilities in the films *Forrest Gump* and *Rain Man* are portrayed positively as sanitized savants, they are represented as powerfully special in society, inevitably isolating or marginalizing them from others not of resemblance or special (Barnes, 1992a). Individuals with disabilities in *Dumb and Dumber* and *There's Something About Mary* are portrayed in scenarios of snickering stereotyping (Carson, 1995) and in "r" (retarded) terminology in *Tropic Thunder* (Haller, 2010). The negative portrayals in the mainstream media are perpetuating stigmatization. The persistence of the stigmatization is precluding recognition of the rights of individuals with disabilities to be equal with individuals and students without disabilities. Those with disabilities have often responded with disability film media as a model of potential positivity for those with disabilities in society.

The proper representation of individuals with disabilities in disability films is considered to be evident in disability film festival maturation (National Institute for Disability and Rehabilitation Research, 2002, p.4). Film festivals are frequently perceived to be positively portraying them, not through their impairments but through their diversity and fortitude (Grandin and Panek, 2013) as persons. For example, festivals are perceived to be focusing on individuals with disabilities in a manner of positively portraying them in *Getting Up, The Importance of Tying Your Own Shoes* and *Wampler's Ascent* of the Reelabilities Disabilities Film Festival, and in *Deedah* and *Finding Fred* of the Sprout Film Festival, through their functioning as normal persons speaking for themselves (International Labor Organization, 2013, p. 27) in an ecosystem of society (Newman, 2013). The individuals with disabilities are the individuals with disabilities in the disability film festival media and in limited mainstream media, as for instance in *The King's Speech* and *The Station Agent*. The representation of them in the disability film festival media is not often perceived to be of the marginalizing and stereotyping stigmatization of the mainstream media (International Labor Organization, 2013, p.5).

The benefits of the disability film media are cited in the literature. The more individuals with disabilities are portraying in proper representations in film media, the more pride they may have as members of society. The

more individuals and students without disabilities learn of individuals with disabilities through the disability film media, the more respect they may have of this marginalized population. The literature indicates the influence of positive stories on individuals and students without disabilities (Saito and Ishiyama, 2005). Not evident however is the extent of the features of the disability film media perceived to impact the individuals and students with and without disabilities positively, or even negatively. Might not disability film festival media focusing on individuals with disabilities portraying themselves be perceived to be marginalizing or oppressing (Baird, Rosenbaum, and Toombs, 2009) if not stigmatizing them? Might not disability media producers inadvertently infuse sanitized sensitive situations that might be perceived by individuals and students with disabilities to be misrepresenting or negatively stigmatizing them? (Wall, 2013, p.1). In this paper, the authors analyzed, as part of a multidisciplinary project of largely engineering and information system systems students, the exact features and impacts of disability film media that influence perceptions of positivity.

2. INTRODUCTION TO PROJECT

"[Individuals with disabilities] need to be present ... on screen ... to [enable] a paradigm shift in perception for [them]; a real change in attitudes by all members of society can then [be] a reality ..." (Council of Europe Disability Action Plan, 2006).

The authors of this study analyzed the features of disability film media in a community engagement project for a Disability Film Festival at Pace University. The project consisted largely of engineering and information systems students without disabilities of the Seidenberg School of Computer Science and Information Systems of Pace University, and of Polytechnic / New York University, a partnered school, which evaluated disability film media from dominant film festivals – Reelabilites Disabilities Film Festival, Sprout Film Festival and Welcome Change Productions. The project concurrently consisted of families, individuals with disabilities and staff from AHRC New York City, an organization for helping individuals with developmental and intellectual disabilities, partnered with the university, and evaluating the film festival media with the students. This project consisted further of limited mainstream film media that includes individuals with disabilities. The essence of the

project was in evaluating the features of the disability film festival, and limited mainstream media, for proper representation of the individuals that impact if not influence perceptions of positivity. The evaluation of the features and impacts was conceptually formulated from engagement and advocacy factors in earlier projects of the first author (Lawler and Li, 2005, & Lawler and Joseph, 2013). The goal of the project was to furnish the highest media of proper representation of the individuals in the film stories for the Disability Film Festival at the university in spring 2014. The outcomes of the project were in increased knowledge of the capabilities and contributions of individuals with disabilities; and increased involvement in advocacy for proper representation of the individuals and in self-advocacy for disability rights – a modern and relevant inclusion of service-learning introduced into the curriculum of information systems.

The project consisted of 23 engineering and information systems students and 6 communications disorders liberal arts students, 29 students, for the fall 2013 – spring 2014 semesters. Each of the students learned of individuals with disabilities in a community engagement course of the first author (Lawler and Joseph, 2013) and the third author, in which they partnered in media productions of storytelling (Klanten, Ehmann, and Schulze, 2011), a few of which were previewed at the Sprout Film Festival. The students learned engagement and advocacy methods in proper representation of situations of individuals with disabilities, through the storytelling (Lawler and Joseph, 2013). Few of the engineering and information systems students learned of individuals with disabilities and disability issues in the curricula of the schools until they were in the community engagement course (Lawler and Joseph, 2013), with the individuals as mentor – mentee partners in the productions of the storytelling, and from the course the students were inherently motivated to be in the current project (Hoxmeier and Lenk, 2003). The project coincidentally consisted of 22 families, higher-functioning individuals and staff from the non-profit organization, in the spring 2014 semester. There were 51 films or "flicks" from 3 – 21 minutes furnished by the film festivals and by extracted mainstream media, for condensing by 7 expert faculty and field professionals in disability studies at the schools to 9 films for evaluation by the families, individuals and staff and the students. The participants were definitely knowledgeable in disability issues,

though the families, individuals with disabilities and the staff are more intimately knowledgeable in the issues than the students. Finally, the participants were led by the primary and secondary authors of this study, as to the features and the impacts that might or might not be the perceptions of positivity on the film media of the project.

Therefore, this study evaluated the features and the impacts of the disability film media, and the limited mainstream media, as to audience participant perceptions of positivity in the media, so that the film media of the project was presentable at the Disability Film Festival at Pace University in 2014. The manner in which the media represents individuals with disabilities is important in the response to the film stories: How might the features of the storytelling impact engagement of the audience participants on the project?; Is the project impacting importance and satisfaction from the storytelling?; How might the features of the storytelling impact advocacy of the participants on the project?; and Is the project at the university impacting self-sufficiency and sociality from the storytelling? If the media of the project properly represents individuals with disabilities in the storytelling, the impacts of the integrity of the media might influence perceptions of positivity (Wall, 2013, p.2). Few scholarly studies evaluate the disability film media systemically.

3. FOCUS OF PAPER

The authors evaluated the features and the impacts of the disability film festival media, by a focus on factors of engagement and advocacy of the audience participants of the project.

Engagement from Features of Media

Importance – Extent of impact from which the participants perceived the generic features of the disability media in proper representations of individuals with disabilities; and

Satisfaction – Extent of impact from which the participants perceived the specific features of the media productions in furnishing satisfaction from proper representations of the individuals with disabilities in the media.

Advocacy from Features of Media

Self-Efficacy – Extent of impact from which the participants perceived the storytelling of the disability film media in furnishing a foundation

for them to be advocates for individuals with disabilities in society; and

Sociality – Extent of impact from which the participants perceived the storytelling of the media in influencing a motivation for them to be involved in other programs of public service with individuals with disabilities.

These factors were derived from earlier studies of the first author on movie productions of storytelling (Lawler and Joseph, 2013) and projects of public service with individuals with disabilities (Lawler and Li, 2005); and the features of the factors were determined from research sources (Riley II, 2005). The focus of the new study was on the benefits of disability film media as perceived by real individuals with disabilities and by students without disabilities, focusing on engineering and information systems students. The model furnished for the disability film media, and the mainstream media, increased proper representations of individuals with disabilities in the dual media and involved the students on a multidisciplinary project new to them.

4. METHODOLOGY OF PAPER

The audience of this research study consisted of engineering and information systems faculty and students of the Seidenberg School of Computer Science and Information Systems of Pace University, and of partnered Polytechnic / New York University, in New York City; and of families, individuals with disabilities and staff of partnered AHRC New York City. The methodology covered the fall 2013 – spring 2014 semesters. The films of the disability film media, and of the limited mainstream media, were evaluated by the participants and the authors in the following iterations:

- A checklist instrument, of 7 yes / no questions on characteristics of the participant students, 7 engagement Likert-like questions on generic features of importance of the media, 13 engagement Likert-like questions on specific features from satisfaction of the media, 7 advocacy Likert-like questions on the current impacts of self-efficacy from the media, and 9 advocacy Likert-like questions on the future potential impacts from sociality of the media, or 43 item questions, was evolved from interviews with the 7 expert faculty and field professionals in disability media studies and from research studies (Riley II, 2005);

- A choice of 51 films condensed to a manageable 9 films of 3 – 21 minutes, from mostly producers of the Reelabilities Disabilities Film Festival, Sprout Film Festival and Welcome Change Productions of individuals with different disabilities, was identified from interviews with the 7 expert faculty and professionals and by the second and first authors, for evaluation by the families, individuals and students;
- A design of 3 focus groups –22 families (8), individuals with disabilities (8) and staff (6) of the non-profit organization, 17 students without disabilities of Pace University and 12 students without disabilities at Polytechnic / New York City, or 51 focus group members – enabled evaluations independently of the features and the impacts of the 9 chosen films, moderated by the second and first authors;
- An evaluation of the 9 films by the 51 focus group members was performed anonymously on a Likert-like rating scale of 5 – very high in perceptions to 1 – very low in perceptions of the features and impacts of the films, with 0 – no perceptions, followed by a generic moderator participant review; and
- An interpretation of the resultant statistics was performed by the first and fourth authors of this study from the MAT LAB 7.10.0 Statistics Toolbox (Evans, 2014).

This methodology conformed generically to principles of critical and emancipatory participatory action research (Koshy, Koshy, and Waterman, 2011). The first, second and third authors educated the focus groups on the evaluation questions of the checklist instrument, before the members looked at the film media, and moderated the pre- and post- screenings of the sessions through principles of focus group research (Krueger and Casey, 2009). The fourth author of this study evaluated the instrument before the evaluations, in the context of construct, content and face validity, including content validity measured in the context of sampling validity. (The checklist instrument is furnished in Table 7 of the Appendix.)

5. ANALYSIS OF DATA AND DISCUSSION OF FINDINGS

An analysis of the data from the focus group of engineering and information systems students without disabilities disclosed an appreciable engagement in importance (means = 3.47/5.00) and satisfaction (3.21), and in advocacy in self-efficacy (3.23) and sociality (3.14), or collectively 3.26, from the features of the disability film media. The evaluations of the films indicated a high of 3.98 (Film 1 - *Breadmakers*) and a low of 2.28 (Film 7 - *Miss You Can Do It* [Beauty Contestants]) collectively in engagement and advocacy of the group. Students without disabilities citing they were not in an earlier community engagement course, a course with individuals with disabilities or a community action program indicated an encouraging 3.26, 3.23 and 3.19 collectively in their engagement and advocacy. Those citing they were not exposed to individuals with disabilities in their families or in their own social settings indicated an also encouraging 3.32 and 3.29 collectively in their engagement and advocacy. The data from the students without disabilities indicated definite impacts from the film media.

Tables 1 and 2 detail the findings from the students without disabilities.

An analysis from the focus group of the families, individuals with disabilities and organizational staff disclosed a clear engagement in importance (3.79) and satisfaction (3.05), and in advocacy in self-efficacy (3.13) and sociality (3.60), or a collectively higher 3.39, from the film media. The evaluations of the films indicated a high of 4.23 (Film 3 - *The Interviewer*) and a low of 2.58 (Film 7 - *Miss You Can Do It*) collectively in engagement and advocacy of this group. The individuals indicated that they felt part of the actions portrayed in the film showings. They felt related to roles presented in situations of the stories and were highly sensitive to inadvertent characterizations (e.g., individuals with cerebral palsy - Film 7 - *Miss You Can Do It*). The data from the families, individuals with disabilities and staff also indicated definite impacts from the media as in the students without disabilities.

Tables 3 and 4 detail the findings from the families, individuals with disabilities and staff. An overall analysis from the data of the focus groups disclosed discernable impacts in engagement in importance (3.64) and satisfaction (3.14), and in advocacy in self-efficacy (3.19) and sociality (3.35), or collectively 3.33, from the features of the media.

The evaluations from this group indicated highs of 4.06 (Film 3 - *The Interviewer*) and 4.00 (Film 1 - *Breadmakers*) and lows of 2.42 (Film 7 - *Miss You Can Do It*) and 2.87 (Film 5 - *Life with Asperger's*) collectively in engagement and advocacy from the media. The participants indicated that except for Film 7 - *Miss You Can Do It*, perceived to be inappropriate condescending, almost all of the films depicted individuals with disabilities credibly and interacting in multidimensional normalized roles. They indicated that the films focused on the individuals (e.g., Film 1 - *Breadmakers*), not on the disabilities of the people; and as applicable on inherent issues (e.g., bullying of individuals with autism and Down syndrome - Film 4 - *Bystander at Grocery Store*, prejudices of individuals with Down syndrome - Film 3 - *The Interviewer*, and poor special services on subways for individuals in wheelchairs - Film 6 - *The Commute*). They indicated that the films involved the individuals with others without disabilities in realistic roles and stories. The impacts were evident from the increased knowledge of the engineering and information systems students of disability issues learned in the films. Their future involvement in advocacy for individuals with disabilities indicated in the data was a refreshing insight. The impacts were evident further from indications of expanded future self-advocacy of the individuals with disabilities inspired by the media. The participants noted the generally high professionalism of the media, which were all documentary person-centered storytelling. In summary, the analysis of the findings noted perceptions of positivity from both the individuals and the students when film media portrays properly those with disabilities in our society.

(Spearman correlation coefficients of the factors across the films indicated statistical significance at the 0.01 level of significance across the films, with the lowest correlation of 0.4144 between satisfaction and sociality and the highest correlation of 0.8732 between satisfaction and self-efficacy; and Wilcoxon rank sum hypothesis testing of the factor participant ratings indicated statistical significance for sociality at the 0.05 level.)

Tables 5 and 6 document the findings from all the focus group participants of the study.

6. IMPLICATIONS OF STUDY

"It is not a competition ... [individuals with disabilities] ... do not have to earn or prove

[their] place ... [they] have a right just because [they] are alive" (Mason, 2002).

An impact of this research study is that the findings from the focus group data confirmed the benefits of disability film media in representing authentic and credible portraits of individuals with disabilities (Ross, 2013, p. 8) having multidimensional personalities (Barnes, 1992b). The film media in the study disclosed diverse experiences of the individuals living their lives like individuals and students without disabilities (International Labor Organization, 2013, p. 21). The implication is that proper realities and representations in the disability film media enable increased respect of individuals and students with disabilities.

Another impact is that the findings from the groups of engineering and information systems students without disabilities disclosed the benefits of engaging them on disability media projects. Even in colleges, few individuals or students without disabilities know others with disabilities. The more engineering and information systems students, and liberal arts students, without disabilities learn of the "lived" lives (Simon, 2013) of others with disabilities, through proper realities and representations in the disability film media, the less they might be prejudiced and the more they might be proactive in disability rights of inherently "good people" (Solomon, 2012) unnoticed in mainstream society (Shapiro, 1994), who might also be prospective information systems students. Those with or without disabilities might leverage multimedia production technologies on projects of disability storytelling (Anspach, 2013). The implication is that storytelling in the disability film media enables productive service skills of engineering and information systems students with or without disabilities in higher institutions of learning.

Another impact is that in a few instances the findings disclosed contrary depictions of improper but inadvertent misrepresentations in the disability film media of the study. These depictions were perceived by the families, fellow individuals with disabilities and staff in that focus group as negative sanitizing or stigmatizing of some of them. The implication is that storytelling in this maturing media might enable equally improper and proper realities and representations of individuals and students with disabilities that might not be filtered in existing producer standards.

A further impact is that the findings divulged proper representations in selected Hollywood mainstream media. The inclusion of individuals with disabilities as the individuals with disabilities in the mainstream media might be a prerequisite (Ross, 2013, p.5). The inclusion of disability equality sensitivity in the mainstream media involving disability media organizations and non-profit organizations for disability rights might be a specification (European Commission, 2013, p. 13). The issue of marketing media portrayals of individuals with disabilities profitably (O'Shaughnessy, 1999) might nevertheless limit progress. The implication is that the model of proper realities and representations of individuals with disabilities in the disability film media might enable proper storytelling in the mainstream media.

The final impact is that the findings from the study highlighted the requisite of self-advocacy of those with disabilities to be not only in the disability media but also in the mainstream media. From the perspective of disability media, they might be motivated to be not only disability or mainstream media performers, but even producers and technicians (European Commission, 2013, p. 27). The implication is that the disability media might be a visual storytelling success, but lacking more mainstream personnel of those with disabilities, resolution of the misrepresentations and repressions of individuals and students with disabilities in the mainstream media will not be a success.

7. LIMITATIONS AND OPPORTUNITIES

The research at a few schools and at one disability organization, having a relatively limited participant sample, limits the reach of the study. The sample of students is largely limited to a niche segregation of engineering and information systems students. The study is limited to the narrow subject of the disability media, not the broad subject of the mainstream media, in which misrepresentations of individuals with disabilities are more obvious than in the disability media. However, the disability film media might be a model for mainstream media producers on proper representations of a marginalized population, if producers are open to positive promotion (Carter-Long, 2013). Moreover, the opportunity for engineering and information systems schools, and liberal arts schools, in involving students in the fascinating field of film media for public service is a potential of this study,

especially from future Disability Film Festivals at Pace University, an opportunity with guest participants for a new study.

8. CONCLUSION OF PAPER

This study evaluated the features and the impacts of the disability film media for a film festival at a major metropolitan university. The authors learned in the main that this media properly represented individuals with disabilities and their lives. Individuals with disabilities have lives like others without disabilities, but are not often perceived properly in the mainstream media. This study included focus groups of individuals with disabilities and engineering and information systems students without disabilities, in interpreting media perceptions of representations. Information systems students without disabilities, like most others without disabilities, have perceptions of individuals and students with disabilities largely through prejudiced mainstream media. They have inevitable perceptions that are not the proper realities of representations of those with disabilities and of issues of disability rights. In conclusion, this study might be a model for the mainstream media, and it will be helpful to instructors in engineering and information systems schools and liberal arts schools that hope more students might be participants, beyond their disciplinary expertise, on outward looking projects of public service involving visual storytelling technologies.

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APPENDIX

Table 1: Evaluations of All Students without Disabilities – Summary

	Mean	Standard Deviation
Engagement from Features of Media		
Importance	3.47	1.63
Satisfaction	3.21	1.67
Advocacy from Features of Media		
Self-Efficacy	3.23	1.67
Sociality	3.14	1.75
Consolidated Engagement and Advocacy	3.26	1.68

Table 2: Evaluations of All Students without Disabilities – Detail

	Mean	Standard Deviation
Engagement and Advocacy from Features of Media		
Film 1 (<i>Breadmakers</i>)	3.98	1.27
Film 2 (<i>Sensory Overload</i>)	3.22	1.80
Film 3 (<i>The Interviewer</i>)	3.92	1.64
Film 4 (<i>Bystander at Grocery Store</i>)	3.63	1.57
Film 5 (<i>Life with Asperger's</i>)	2.91	1.47
Film 6 (<i>The Commute</i>)	3.72	1.44
Film 7 (<i>Miss You Can Do It</i>)	2.28	1.61
Film 8 (<i>Getting Up</i>)	2.97	1.60
Film 9 (<i>Motherly</i>)	2.73	1.87

Table 3: Evaluations of All Individuals with Disabilities – Summary

	Mean	Standard Deviation
Engagement from Features of Media		
Importance	3.79	1.60

Satisfaction	3.05	1.91
Advocacy from Features of Media		
Self-Efficacy	3.13	1.84
Sociality	3.60	1.71
Consolidated Engagement and Advocacy	3.39	1.79

Table 4: Evaluations of All Individuals with Disabilities – Detail

	Mean	Standard Deviation
Engagement and Advocacy from Features of Media		
Film 1 (<i>Breadmakers</i>)	3.89	1.64
Film 2 (<i>Sensory Overload</i>)	3.64	1.55
Film 3 (<i>The Interviewer</i>)	4.23	1.26
Film 4 (<i>Bystander at Grocery Store</i>)	3.44	1.85
Film 5 (<i>Life with Asperger's</i>)	2.82	2.01
Film 6 (<i>The Commute</i>)	3.35	1.87
Film 7 (<i>Miss You Can Do It</i>)	2.58	1.88
Film 8 (<i>Getting Up</i>)	3.44	1.76
Film 9 (<i>Motherly</i>)	3.16	1.71

Table 5: Evaluations of All Students without Disabilities and All Individuals with Disabilities – Summary

	Mean	Standard Deviation
Engagement from Features of Media		
Importance	3.64	1.62
Satisfaction	3.14	1.79
Advocacy from Features of Media		
Self-Efficacy	3.19	1.75
Sociality	3.35	1.75
Consolidated Engagement and Advocacy	3.33	1.74

Table 6: Evaluations of All Students without Disabilities and All Individuals with Disabilities – Detail

	Mean	Standard Deviation	Mean	Standard Deviation
	Importance		Satisfaction	
Engagement from Features of Media				
Film 1 <i>(Breadmakers)</i>	4.17	1.16	4.25	1.21
Film 2 <i>(Sensory Overload)</i>	3.66	1.63	3.25	1.80
Film 3 <i>(The Interviewer)</i>	3.51	1.76	4.40	1.06
Film 4 <i>(Bystander at Grocery Store)</i>	4.21	1.26	2.68	1.92
Film 5 <i>(Life with Asperger's)</i>	3.26	1.70	2.32	1.71
Film 6 <i>(The Commute)</i>	3.75	1.57	3.38	1.61
Film 7 <i>(Miss You Can Do It)</i>	3.08	1.69	2.09	1.77
Film 8 <i>(Getting Up)</i>	4.11	1.46	3.02	1.49
Film 9 <i>(Motherly)</i>	3.02	1.79	2.87	1.95
Advocacy from Features of Media	Self-Efficacy		Sociality	
Film 1 <i>(Breadmakers)</i>	4.06	1.51	3.53	1.67
Film 2 <i>(Sensory Overload)</i>	3.45	1.65	3.26	1.74
Film 3 <i>(The Interviewer)</i>	4.43	1.18	3.91	1.66
Film 4 <i>(Bystander at Grocery Store)</i>	3.02	1.78	4.26	1.11
Film 5 <i>(Life with Asperger's)</i>	2.53	1.71	3.36	1.62
Film 6 <i>(The Commute)</i>	3.26	1.69	3.83	1.73
Film 7 <i>(Miss You Can Do It)</i>	1.98	1.70	2.51	1.64
Film 8 <i>(Getting Up)</i>	2.98	1.49	2.62	1.92
Film 9 <i>(Motherly)</i>	2.96	1.76	2.85	1.77

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Consolidated Engagement and Advocacy	Mean	Standard Deviation
Film 1 (<i>Breadmakers</i>)	4.00	1.42
Film 2 (<i>Sensory Overload</i>)	3.41	1.70
Film 3 (<i>The Interviewer</i>)	4.06	1.49
Film 4 (<i>Bystander at Grocery Store</i>)	3.54	1.70
Film 5 (<i>Life with Asperger's</i>)	2.87	1.73
Film 6 (<i>The Commute</i>)	3.56	1.66
Film 7 (<i>Miss You Can Do It</i>)	2.42	1.74
Film 8 (<i>Getting Up</i>)	3.18	1.69
Film 9 (<i>Motherly</i>)	2.92	1.81

Table 7: Model of Disability Film Festival Media Study

Disability Expert Faculty and Field Professionals AHRC New York City Pace University	Families, Individuals with Disabilities and Staff AHRC New York City	Undergraduate Students	
		Pace University	Polytechnic University

Film Media Sample

n=9 (51)

Characteristics of Participants of Study(1)	Undergraduate Students	
	Pace University	Polytechnic University
	n=17	n=12
Gender: Male Female		
Year: Freshman Sophomore Junior Senior		

I have been in a community engagement course at the university.	Perception Rating Yes No
I have been in a community engagement course at the university with partnered client individuals with disabilities.	Perception Rating Yes No
I have been in a community action program or a non-profit organization servicing individuals with disabilities	Perception Rating Yes No
I have individuals with disabilities in my family.	Perception Rating Yes No
I have friends or met individuals with disabilities in a social setting or at the university.	Perception Rating Yes No
I have been at mainstream film media in which there were characters depicted as individuals with disabilities.	Perception Rating Yes No
I have been at disability film media in which there were characters depicted as individuals with disabilities.	Perception Rating Yes No

Film Media Sample: Name (n=9/51)
Film Media Source: Name

Engagement Factor– Satisfaction (2) Specific							
Features of Film Media Sample (3)	Disability Expert Faculty and Professionals	Families, Individual with Disabilities and Staff			Undergraduate Students		
	Perception Rating Scale	2	1	0	Pace University	Polytechnic University	
Advocacy by Actual Individuals with Disabilities (Advocacy for Themselves)	5 (Very High)	4	3	2	1 (Very Low)	0	
Characterization by Actual Individuals with Disabilities of Individuals with Disabilities	n=7 5 (Very High)	n=22 4	3	2	1 (Very Low)	0	
		n=17				n=12	
Engagement Factor – Importance (2)							
Generic Features of Film Media Sample of Study (3)	Perception Rating Scale						
Characterization of Individuals with Disabilities in Major Roles	5 (Very High)	4	3	2	1 (Very Low)	0	
Character Portrayal in Mainstream Normalized Roles (Medical Deficit Model) (Not One-Dimensional Roles of Heroes, Savants or Victims (but Typical People)	5 (Very High)	4	3	2	1 (Very Low)	0	
Able to Interact in Society (Disabilities of Individuals from Story)	5 (Very High)	4	3	2	1 (Very Low)	0	
Application of Entertainment and Interest	5 (Very High)	4	3	2	1 (Very Low)	0	
Comprehension of Disabilities Issues from Story	5 (Very High)	4	3	2	1 (Very Low)	0	
-Individuals with Disabilities	5 (Very High)	4	3	2	1 (Very Low)	0	
-Individuals without Disabilities	5 (Very High)	4	3	2	1 (Very Low)	0	
Broadness of Perspective	5 (Very High)	4	3	2	1 (Very Low)	0	
Connection of Audience or Depth of Elicited Emotion from Story	5 (Very High)	4	3	2	1 (Very Low)	0	
-Domestic	5 (Very High)	4	3	2	1 (Very Low)	0	
-International	5 (Very High)	4	3	2	1 (Very Low)	0	
Emphasis on Individuals Not the Disabilities	5 (Very High)	4	3	2	1 (Very Low)	0	
Functionality of Film Media (Not on Pity but on Strengths)	5 (Very High)	4	3	2	1 (Very Low)	0	
-Education	5 (Very High)	4	3	2	1 (Very Low)	0	
Engagement from Focus Group Participants	5 (Very High)	4	3	2	1 (Very Low)	0	
Marking (“Part of the Action” vs. “Personality of the Game”) of Film Media	5 (Very High)	4	3	2	1 (Very Low)	0	
Honesty in Imaging of Individuals with Disabilities in Story	5 (Very High)	4	3	2	1 (Very Low)	0	
-Documentary Real Story	5 (Very High)	4	3	2	1 (Very Low)	0	
Fictional and Interaction with Individuals without Disabilities in Story – Not Isolated in Society	5 (Very High)	4	3	2	1 (Very Low)	0	
Professionalism of Film Media (Other Than Families; Other Options in Society)	5 (Very High)	4	3	2	1 (Very Low)	0	
-Cinematography (Color, Lighting and Sound / Tempo)	5 (Very High)	4	3	2	1 (Very Low)	0	
-Editing	5 (Very High)	4	3	2	1 (Very Low)	0	
©2014 EDSIG (Education Special Interest Group of the AITP), www.aitp-edsig.org and FITE (Foundation for Information Technology Education), edfoundation.org/	5 (Very High)	4	3	2	1 (Very Low)	0	
Believable Realistic Story?	5 (Very High)	4	3	2	1 (Very Low)	0	

Language Terminology (Not Negative -“People First” Terminology)	Perception Rating Scale 5 (Very High) 4 3 2 1 (Very Low) 0
Perceptions of Individuals with Disabilities by Individuals without Disabilities in Story (Not Only a One Character Perspective or Point of View)	Perception Rating Scale 5 (Very High) 4 3 2 1 (Very Low) 0
Advocacy Factor – Self-Efficacy (2) Current Impacts of Film Media Sample of Study (1)	
I have increased pride in my potential as a person as a result of this film media.	Perception Rating Scale 5 (Very High) 4 3 2 1 (Very Low) 0
My knowledge of the capabilities and contributions of individuals with disabilities increased as a result of this film media.	Perception Rating Scale 5 (Very High) 4 3 2 1 (Very Low) 0
My knowledge of disabilities increased as a result of this film media.	Perception Rating Scale 5 (Very High) 4 3 2 1 (Very Low) 0
My knowledge of disability issues increased as a result of this film media.	Perception Rating Scale 5 (Very High) 4 3 2 1 (Very Low) 0
My knowledge of individuals with disabilities increased as a result of this film media.	Perception Rating Scale 5 (Very High) 4 3 2 1 (Very Low) 0
My knowledge of the realities faced by individuals with disabilities increased as a result of this film media.	Perception Rating Scale 5 (Very High) 4 3 2 1 (Very Low) 0
My possible prejudices or stereotypes of individuals with disabilities decreased as a result of this film media.	Perception Rating Scale 5 (Very High) 4 3 2 1 (Very Low) 0
Advocacy Factor – Sociality (2) Future Potential Impacts of Film Media Sample of Study (1)	
I plan to be more involved in advocacy for proper representation of individuals with disabilities in the mainstream film media.	Perception Rating Scale 5 (Very High) 4 3 2 1 (Very Low) 0
I plan to be more involved in advocacy for disability rights in society.	Perception Rating Scale 5 (Very High) 4 3 2 1 (Very Low) 0
I plan to be more involved in advocacy for meaningful inclusion and pursuit of social justice for individuals with disabilities and for other minorities in society.	Perception Rating Scale 5 (Very High) 4 3 2 1 (Very Low) 0
I plan to be more involved in individual self- advocacy for proper representation of individuals with disabilities in the mainstream film media.	Perception Rating Scale 5 (Very High) 4 3 2 1 (Very Low) 0
I plan to be more involved in self-advocacy for disability rights and other civic rights in society.	Perception Rating Scale

	5 (Very High) 4 3 2 1 (Very Low) 0
I plan to be more involved in self-advocacy for social justice for individuals with disabilities and other minorities in society.	Perception Rating Scale 5 (Very High) 4 3 2 1 (Very Low) 0
I plan to participate in a community engagement course or program at the university.	Perception Rating Scale 5 (Very High) 4 3 2 1 (Very Low) 0
I plan to participate in a community engagement course on outreach projects with students of a university.	Perception Rating Scale 5 (Very High) 4 3 2 1 (Very Low) 0
I plan to volunteer with a community action program or a non-profit organization servicing individuals with disabilities.	Perception Rating Scale 5 (Very High) 4 3 2 1 (Very Low) 0

Legend:

* Perception Rating: 1-Yes and 2-No

** Perception Rating Scale: 5 – Very High Participant Reflection, 4 – High Participant Reflection, 3 – Intermediate Participant Reflection, 2 – Low Participant Reflection, 1 – Very Low Participant Reflection, and 0 – No Participant Reflection

Sources:

- (1) Lawler and Li, 2005
- (2) Lawler and Joseph, 2013
- (3) Riley II, 2005