

RECREATIONAL USE OF THE INTERNET: AN EXAMINATION OF UNDERGRADUATE BUSINESS STUDENTS

Carl J. Case, St. Bonaventure University

Darwin L. King, St. Bonaventure University

Todd S. Palmer, St. Bonaventure University

ABSTRACT

The Internet offers a plethora of recreational opportunities beyond the realm of social media. Given that university students have discretionary time, Internet access, and recreation needs, this longitudinal study was conducted to empirically examine how undergraduate business students utilize the Internet for leisure activities. Although this research examined nine online recreation activities, results demonstrate that students participate primarily in five activities. These include non-school related surfing, shopping, downloading music, playing games other than gambling, and instant messaging. While nearly all business students participate in at least one activity, activity participation and activity time have been trending downward during the five-year study for nearly all activities. Overall, participation decreased slightly to 94% of students and total activity minutes per week declined by 16% per student. Findings also suggest that gender and academic class are factors with respect to the time spent on individual online recreation activities for undergraduate business students. Seven of the recreation activities were statistically correlated with males. Moreover, if academic class is used as a proxy for age, it appears that possibly maturation and/or education may affect the level of recreation engagement for this student population.

Keywords: Online Recreation, Gambling, Shopping, Music Downloading, Empirical Study

INTRODUCTION

An Associated Press-NORC Center for Public Affairs Research survey of U.S. teens age 13-17 found that nearly 60% have taken a break from social media, typically a week or longer (Ortutay, 2017). The reasons for voluntary breaks include social media getting in the way of work or school (38% of respondents), tired of the conflict and drama (nearly 25% of respondents), and tired of having to keep up with what is going on (20% of respondents). Interestingly, males were more likely to feel overloaded with information on social media and more likely to take longer breaks.

Fortunately, there are a variety of other forms of recreation on the Internet available to online users. Options include gambling, gaming, shopping, listening to music, viewing visiting chatrooms, pornography, and so on. Revenue and usage statistics illustrate the size and growth of each of these activities. For example, according to statistica.com (2016), the online gambling market will be approximately \$47 billion in 2017 and reach \$52 billion in 2018. A 2013 survey by SuperData Research further found that 57% of online gamblers in the U.S. are female and that online gamblers tend to be young, with well over 40% ranging in age from 21-34 (Gambling.net, 2017). In terms

of game content viewers, 54% are male, have an average age of 33, and have an average annual personal income of \$58,000 (SuperData, 2017).

Relative to shopping, the second quarter 2017 U.S. retail e-commerce sales were \$111.5 billion, an increase of 16% from the second quarter of 2016 (U.S. Census, 2017). This amounted to \$419 billion in e-commerce during the 12-month period and accounted for nearly 9% of all retail sales, a percentage expected to reach 17% by 2020 (Keyes, 2017). Overall, a Pew Research Center survey of U.S. adults found that 79% of individuals are now online shoppers (Smith & Anderson, 2016). This is a dramatic increase from their June 2000 survey in which just 22% of Americans had made a purchase online.

In addition, digital global recording music industry revenues were \$7.8 billion in 2016, an 18% increase in just one year (ifps.org, 2017). Although digital download revenue decreased by 20%, streaming revenue increased by 60%. With respect to downloading, research conducted by the global market research firm IPSOS in 2016 found that 30% of all Internet users and 49% of individuals age 16-24 had engaged in the practice of stream ripping during the previous six months. ‘Ripping’ or creating a downloadable file from music that is available to stream online has become the most common method of illegally downloading music.

In terms of chat rooms, there are several sites. Anonymous chatrooms, for example, include enterchatroom, zobe, chatforfree, teenchat, rockchat, and so on (codeablemagazine.com, 2017). To give a size perspective, one free site, talk.chat (2017), has 661 chat rooms with 8,585 lines of chat.

Finally, pornography is available for recreation. Juniper Research estimated that by 2017, a quarter of a billion people will be accessing mobile adult content from their phones or tablets, an increase of more than 30% from 2013 (Juniper, 2013). A Barna Group study further found that in the U.S. in 2014, 79% of men and 76% of women age 18-30, 67% of men and 16% of women age 31-49, and 49% of men and 4% of women age 50-68 view pornography at least once a month (Covenanteyes.com, 2015). A Maire Claire survey found that 31% of women watch porn every week or so (De Cadenet, 2015). For those watching porn, 90% watch Internet porn, 75% use free sites, and 62% use a smartphone.

As previously described, there are several alternatives on the Internet for the recreation seeker. Because undergraduates have discretionary time, readily available access to the Internet, and recreational needs, this empirical study was conducted to investigate how business students have utilized online recreational activities from a longitudinal perspective. In addition, the study examines if gender and age affect usage. Results will be useful in determining if there are trends and/or problematic behaviors that may need to be addressed from a pedagogical perspective.

PREVIOUS RESEARCH

Previous research has explored several online recreation activities. Researchers have studied non-productive activities, leisure time behavior, Internet gaming, online auctions, music downloading, instant messaging, and recreation time.

In an exploratory study conducted in 2003, Case and King (2003) found that undergraduates spend a considerable amount of time in non-productive Internet activities. Instant messaging and non-school related surfing were the most prevalent and time-consuming behaviors with 88% of respondents (spending 4.5 hours per week) using instant messaging and 83% (spending nearly 2 hours per week) surfing. Moderate incidence behaviors included downloading music/movies (64% of respondents), shopping (44% of respondents) and playing games (43% of respondents). The least common behaviors included downloading and/or viewing pornography (14% of respondents), chatroom participation (4% of respondents), gambling (4% of respondents), and cybersex (2% of respondents). Overall, 98% of students indicated at least one behavior with students spending an average of 434 minutes, or 7 1/4 hours per week, using the Internet for non-school purposes.

Beutel et.al (2011) also examined Internet leisure behavior, specifically that of online users in Germany. Results show that 55% of the respondents used the Internet in their leisure time with users likely to be younger and higher in socioeconomic status (education, employment, and income). Leisure-time use included emails (93% of subjects), information research (92% of subjects), shopping (76% of subjects), chatting (62% of subjects), online communities (36% of subjects), games (34% of subjects), sex (11% of subjects), and gambling (9% of subjects). Chatting, online communities, games, and sex were domains of young, mostly male adults. In addition, 9% indicated at least one negative consequence of Internet use, especially neglect of recreational activities and problems with family/partner, work or education, and health.

Dong et.al (2017) studied Internet gaming. The researchers found that recreational (non-problematic) game users, as compared to those with Internet gaming disorder, show greater executive control and greater activations of brain regions implicated in motivational processes during reward processing and greater cortical activations during loss processing. Overall, the findings suggest that neural and behavioral features distinguish these two types of Internet gamers.

Wu, et.al (2009) explored purchasing via online auction sites. The purpose of the study was to develop a theoretical model regarding bidding strategy and its influence on bidder satisfaction. The researchers found support for the intermediary roles of price and hedonic value in the relationship between quality strategy and bidder satisfaction. Moreover, results suggest that the online bidder is inclined to adopt a higher-price-oriented bidding strategy at the beginning of the auction.

Plowman and Goode (2009) examined the intention to illegally download music from the Internet. The researchers found that individuals' attitude, ability to download online music, and the price of legitimate music were the most significant factors affecting one's downloading behavior. Moreover, price was significant for light downloaders but price and quality were important for heavy downloaders.

Glass and Li (2010) empirically investigated technology acceptance model factors, social influence factors, and demographic factors on instant message adoption in the workplace. The technology acceptance model factors include perceived ease of use and perceived usefulness. Social influence factors include subjective norm and perceived critical mass. Demographic factors include gender and age. Results found that social influence was more important than technology

acceptance model factors in determining instant message adoption. In addition, gender and age did not impact the adoption of instant messaging.

Finally, in a recent study, Merve, Senol, and Suat (2016), examined the recreational use of the Internet by research assistants in Turkey. Recreational use includes gaming, social media, e-mailing, websites, chat room, forums, and so on. Results suggest that as leisure time insufficiency increases, recreational use of the Internet increases. Thus, those who perceived their leisure time as insufficient or very insufficient spent more time on the Internet for recreational purposes. Moreover, the study found that research assistants' levels of recreational Internet usage increased as duration of leisure time decreased.

RESEARCH DESIGN

This study employs a survey research design. The research was conducted at a private, northeastern U.S. university. A Student Internet Recreational Activity IRB-approved instrument was developed by the authors and administered to undergraduate students enrolled in a School of Business course. The courses included a variety of subjects such as Business Information Systems, Introduction to Financial Accounting, Microeconomics, Macroeconomics, and Business Policy. A non-probability convenience sample of class sections and faculty members was selected. The surveys were collected during a five-consecutive year or 10 semester period (from Fall 2012 until Spring 2017).

The survey instrument was utilized to collect student demographic data such as gender and academic class. In addition, the survey examined student Internet behavior by prompting respondents to estimate the number of minutes per week they spent in various electronic behaviors such as visiting chatrooms, gambling, and so on. Results were summarized by activity for each academic year and correlations were calculated to determine potential relationships between the various activities and the study variables of gender and academic class. A copy of the survey instrument may be obtained by contacting the authors.

Participants were informed that all responses are anonymous and will be used solely for research correlation purposes and that by filling in this survey, he/she was giving his/her consent to act as a respondent. In addition, the participant was informed that he/she could choose not to answer any questions in the survey that he/she did not feel comfortable answering, that he/she must be 18 years of age or older to participate, and that he/she may opt out of the survey at any time. All surveys were anonymous and completed in an academic classroom. The response rate was nearly 100 percent. Finally, students were informed that results would have no effect on their course grade.

STUDY DEMOGRAPHICS

A sample of 1,609 usable surveys was obtained. Table 1 indicates that, overall, 61% of the respondents were male and 39% were female.

Table 1. Gender Response Rate by Academic Year

	2013	2014	2015	2016	2017	Total
Male	58%	63%	60%	63%	59%	61%
Female	42%	37%	40%	37%	41%	39%
Count	383	382	352	260	232	1609

Table 2 illustrates the response rate by academic class. Overall, 16% of respondents were freshmen, 32% were sophomores, 23% were juniors, and 29% were seniors.

Table 2. Academic Class Response Rate by Academic Year

	2013	2014	2015	2016	2017	Total
Freshmen	23%	6%	18%	22%	10%	16%
Sophomore	28%	37%	34%	28%	28%	32%
Junior	24%	23%	20%	21%	31%	23%
Senior	25%	34%	28%	29%	31%	29%

RESULTS

Responses were first analyzed with respect to the participation level of various Internet activities that could be considered entertainment or recreation for the student subjects. Table 3 shows that for all study years, the highest percentage of students participated in non-school related surfing and shopping. In 2013, for example, 91% of respondents used the Internet for non-school related surfing and 62% used the Internet for shopping. By 2017, non-school related surfing decreased to 81% but shopping increased to 68% of respondents. Other activities were also common. In 2013, 55% of respondents downloaded music, 38% played games (other than gambling), and 31% used instant messaging. By 2017, downloading music decreased to 41%, playing games decreased to 32%, but instant messaging increased to 56%. All other activities had much less participants. In 2013, only 16% downloaded/viewed pornography, 5% visited chatrooms, 4% gambled, and 2% participated in cybersex. Similarly, in 2017, only 15% downloaded/viewed pornography, 6% visited chatrooms, 5% gambled, and 0% participated in cybersex. Overall, nearly all students participated in at least one of the entertainment activities. From 2013 to 2017, participation was 97%, 98%, 97%, 98%, and 94%, respectively per year.

Table 3. Internet Activity (Percentage of Students)

Internet Activity	Academic Year				
	2013	2014	2015	2016	2017
Non-school related surfing	91%	93%	91%	90%	81%
Shopping	62%	69%	70%	72%	68%
Downloading music	55%	55%	52%	52%	41%
Playing games (other than gambling)	38%	39%	35%	42%	32%
Instant messaging	31%	41%	48%	55%	56%
Download/view pornography	16%	20%	24%	24%	15%
Visiting chatrooms	5%	5%	4%	10%	6%
Gambling	4%	5%	5%	10%	5%
Cybersex	2%	2%	3%	3%	0%
Overall	97%	98%	97%	98%	94%

Next, participation volume was examined. Table 4 provides a breakdown of minutes per week for subjects indicating participation in each Internet activity. The analysis is segmented by academic year. In 2013, respondents indicating spending 176 minutes in non-school related surfing, 50 minutes shopping, 55 minutes downloading music, 103 minutes playing games (other than gambling), 99 minutes instant messaging, 65 minutes downloading/viewing pornography, 84 minutes visiting chatrooms, 84 minutes gambling, and 241 minutes participating in cybersex. By 2017, non-school related surfing decreased to 114 minutes, shopping decreased to 35 minutes, downloading music decreased to 48 minutes, playing games (other than gambling decreased to 100 minutes), instant messaging increased to 102 minutes, downloading/viewing pornography increased to 70 minutes, visiting chatrooms increased to 135 minutes, gambling decreased to 35 minutes, and participating in cybersex decreased to 10 minutes. Overall minutes per respondent from 2013 to 2017 were 324 minutes, 301 minutes, 310 minutes, 335 minutes, and 271 minutes, respectively.

Table 4. Internet Activity (Minutes Per Week for Those with Activity)

Internet Activity	Academic Year				
	2013	2014	2015	2016	2017
Non-school related surfing	176	163	151	144	114
Shopping	50	42	41	52	35
Downloading music	55	39	38	45	48
Playing games (other than gambling)	103	85	115	89	100
Instant messaging	99	114	121	139	102
Download/view pornography	65	40	46	57	70
Visiting chatrooms	84	81	43	44	135
Gambling	84	33	36	32	35
Cybersex	241	26	56	82	10
Overall	324	301	310	335	271

Finally, Spearman Rho correlations were calculated to determine if there are correlations between activity participation minutes and the demographic variables of gender and academic class. Table 5 demonstrates that with respect to gender, all activities, except for instant messaging, had

statistically significantly correlations with gender. Males were correlated with non-school related surfing (significant at the .01 level), downloading music (significant at the .01 level), playing games (significant at the .01 level), downloading/viewing pornography (significant at the .01 level), visiting chatrooms (significant at the .05 level), gambling (significant at the .01 level), and cybersex (significant at the .01 level). Females were correlated with shopping (significant at the .01 level). With respect to academic class, four activities were significantly correlated. Freshmen were more likely to shop (significant at the .01 level), download music (significant at the .01 level), and instant message (significant at the .01 level) than seniors. Seniors, however, were more likely to gamble (significant at the .05 level).

Table 5. Spearman Rho Correlations Between Activity Minutes and Study Variables

Internet Activity	Gender	Academic Class
Non-school related surfing	.149**	.025
Shopping	-.239**	-.078**
Downloading music	.068**	-.077**
Playing games (other than gambling)	.283**	.019
Instant messaging	.043	-.137**
Download/view pornography	.340**	.040
Visiting chatrooms	.051*	.002
Gambling	.174**	.062*
Cybersex	.069**	-.006

* Correlation is significant at .05 level (2-tailed).

** Correlation is significant at .01 level (2-tailed).

CONCLUSIONS AND FUTURE RESEARCH

Results indicate that there are five primary non-social media Internet recreation activities. Non-school related surfing and shopping activities had the highest percentage of student users during each year of the five-year study period. Non-school related surfing ranged from 81% to 93% of undergraduates per year. Shopping had a range of 62% to 72% of undergraduates per year. The other primary activities include downloading music (41% to 55% per year), playing games other than gambling (32% to 42% per year), and instant messaging (31% to 56% per year). The lowest participation activities are downloading/viewing pornography (15% to 24% per year), visiting chatrooms (4% to 10% per year), gambling (4% to 10% per year), and cybersex (0% to 3% per year). Overall, 94% to 98% of students indicated engaging in at least one of the recreational activities each academic year.

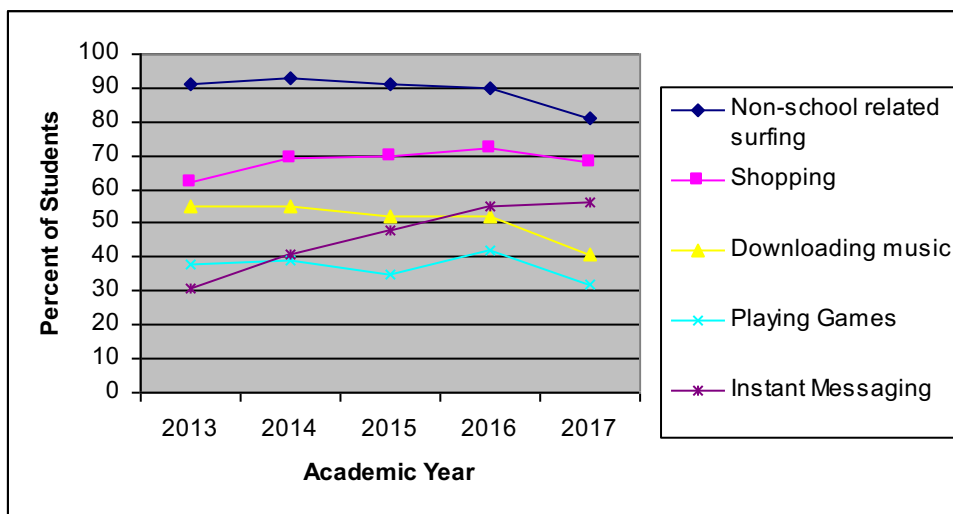
In terms of non-social media Internet recreation activity per student, volumes vary per activity per year. Non-school related surfing accounted for the most minutes per week (114 to 176 minutes per week per year) during four of the five study years. Instant messaging (99 to 139 minutes per week per year) and playing games other than gambling (85 to 115 minutes per week per year) were consistently the next most time intensive activities. Other activity ranges include shopping (35 to 52 minutes per week per year), downloading music (38 to 55 minutes per week per year),

downloading/viewing pornography (40 to 70 minutes per week per year), visiting chatrooms (43 to 135 minutes per week per year), gambling (32 to 84 minutes per week per year), and cybersex (10 to 241 minutes per week per year). It should be noted that the extremes of 135 minutes for visiting chatrooms in 2017 and 241 minutes for cybersex in 2013 are likely anomalies and are not representative of the general business student population given that only 6% of students visited chatrooms and 2% participated in cybersex during those years, respectively.

When examining study variables, gender was statistically significantly correlated with eight of the nine recreational activities. Females were more likely to engage in shopping while males were more likely to engage in non-school related surfing, downloading music, playing games other than gambling, downloading/viewing pornography, visiting chatrooms, gambling, and cybersex. Instant messaging, however, was not correlated to gender. In terms of academic class, shopping, downloading music, and instant messaging were significantly negatively correlated. In other words, freshmen, relative to seniors, were more likely to engage in these activities. Gambling, on the other hand, was more correlated with seniors rather than freshmen. No other activities were statistically correlated with academic class.

There are three important implications from the study. One finding is that with respect to three of the primary recreational activities, the percent of students engaging in these activities has decreased (Figure 1). Non-school related shopping, downloading music, and playing games decreased as a percent for undergraduate business students from 2013 to 2017. Conversely, two activities, shopping and instant messaging, have increased. In fact, the percent of students instant messaging increased by 80% from 31% to 56% of students. This suggests a dramatic change in recreation participation and a greater interest in instant communication. This trend is consistent with prior research that has found nearly 100% of college students are participating in social media communication, with over three hours of communication per student per day (Case & King, 2017). Overall participation in any activity decreased slightly from 97% to 94% of students.

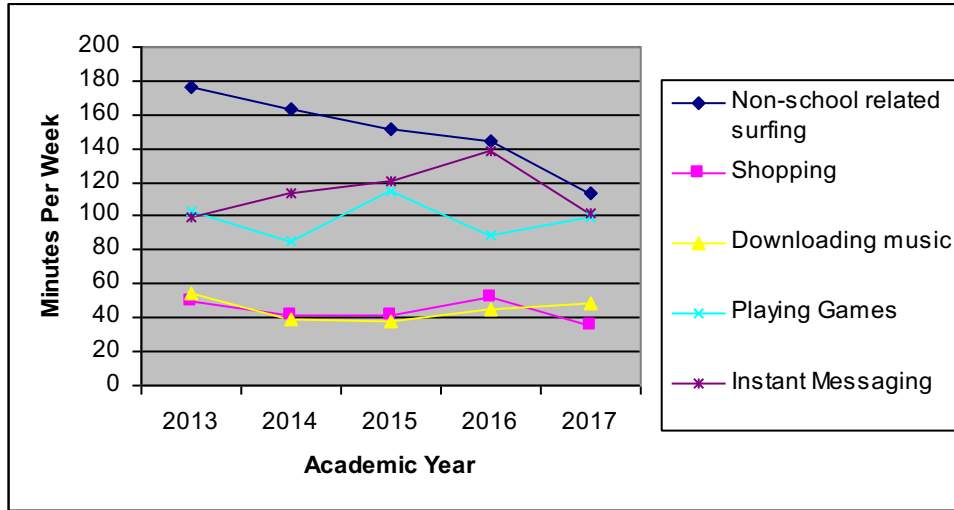
Figure 1. 2013-2017 Percentage of Students by Activity



Moreover, Figure 2 further illustrates this change in behavior and downward trend. When examining minutes per student per week, it is evident that undergraduates are also spending less

time in each of these traditional primary recreation activities. Total minutes have decreased by 16% from 324 minutes (nearly 5.5 hours per week) to 271 minutes (4.5 hours per week). This is a 163 minute or 38% decrease from the exploratory study conducted by Case and King in 2003.

Figure 2. 2013-2017 Minutes Per Week by Activity



A second implication relates to gender. Seven of the recreation activities were statistically correlated with males while one activity, shopping, was correlated with females. Instant messaging minutes, on the other hand, were not gender related and are consistent with the findings of Glass and Li. It is possible that males are more forthcoming and/or proud of recreational activities. Conversely, females may perceive recreation activities while in college as a personal negative reflection and thus underreport participation. Moreover, it could be that females do not value recreation as much as males and engage more in other activities such as social media communication and/or academic endeavors. In any event, results imply that educators may need to implement different approaches with males versus females if there is a desire to steer students more towards academic interests and away from Internet recreation activities.

Finally, results suggest that academic class is a factor with respect to recreation. Shopping, downloading music, and instant messaging minute levels were less likely to occur as the student progressed from freshmen to senior years. However, gambling minutes increased, likely a result of the student achieving the legal gaming minimum age of 21. If academic class is used as a proxy for age, it appears that possibly maturation and/or education may affect the level of recreation engagement. This finding, however, is contrary to Glass and Li's research that age did not impact the adoption of instant message. Results also suggest the further need for educational efforts directed at upperclassmen so that these students may be better able to minimize the negative aspects of gambling such as addiction.

The limitations of this study are primarily a function of the nature of the research methodology and sample. The instrument was developed by the researchers and relies on self-reporting so there could be recency effects and underreporting of activity. Moreover, the research was conducted using a sample of one university. Finally, although academic class was relatively equally distributed, there were less freshmen surveyed. As a result, replication at multiple universities and

the inclusion of more freshmen would increase the research robustness. Future research needs to examine if there is a relationship between recreational use of the Internet and student academic performance variables such as study time, class engagement, ability to focus, and so on. These results research would be helpful in determining if these are indeed trends and if educational efforts can be effectively employed to mitigate negative recreation activities. The study does, however, further clarify the state of student Internet recreation among undergraduate business students.

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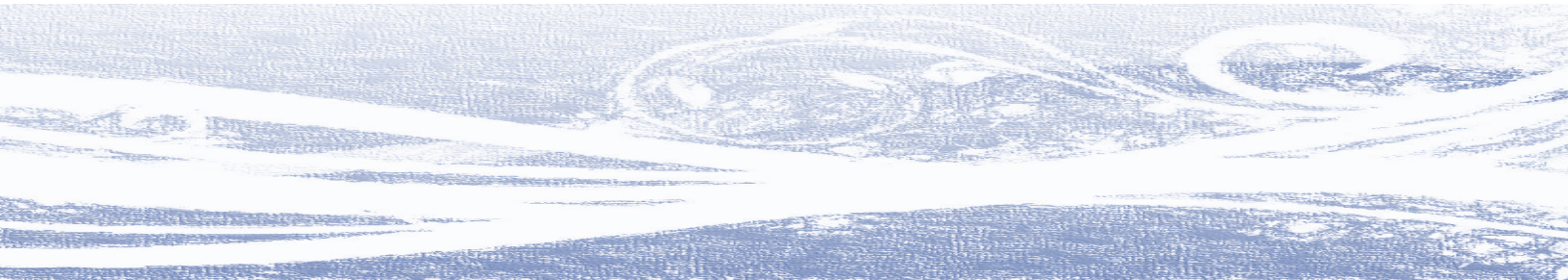
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