# Why MSIM?: Factors Influencing Program Choice for MS in Information Management Students at the University of Washington

IMT 570 Analytic Methods for Information Professionals

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## ABSTRACT

There are many Masters of Information Management programs available to future graduate students. Therefore, it can be difficult to discern why students select University of Washington's MS in Information Management (MSIM) program. This study explores the motivational factors underlying iSchool students' decisions to attend the MSIM program, and why they believe the program will effectively meet their needs. There are several factors that may assist in shaping their decisions, such as the geographic location of the program or considerations from personal attachments. Our group selected candidates to interview, and a card sorting methodology was applied to reflect the personal experiences and factors that influenced their decision. Following this, a survey instrument was developed (based on these interviews), and administered to 52 graduate students in order to measure the influences of these factors on the students' decisions to join MSIM. The data was analyzed using histograms and descriptive statistics of each question's responses to compare which factors were rated most important, as well as a cross tabulation to see if there were any trends or associations between a factor and gender or nationality. We found that job, academic, and geographic factors were the most important factors to students, and that there was no statistical significant difference between students of different nationalities and genders. These findings provide much needed personal clarification from students on the subjects that could help guide the iSchool's efforts in marketing the program more effectively to future graduate students and for maintaining student satisfaction within the program.

## **INTRODUCTION**

Every year, students from around the world apply to the University of Washington Information School's MS in Information Management (MSIM) program. The admitted student population comes from a wide variety of places, cultures, intellectual interests, socioeconomic levels, and educational backgrounds. These students share the commonality of having been admitted to, and accepted the offer of admission to the MSIM program, but such a diverse group will also have varying answers to why and how they chose to attend the iSchool. Through deeper investigation into these factors influencing their decision, the University of Washington could gain a better idea of why students choose to specifically study in the MSIM program through the iSchool.

It would be beneficial to know what factors influence a student's decision to pursue an MSIM degree, specifically from the University of Washington's iSchool. This is an important question to answer, both from the perspective of students and the school administration. In order to provide a satisfying educational experience to their students, the University and the iSchool need to know what it is that students expect. It is harmful for all parties involved if students entering the program desire something completely different than what is being offered; the student will not be satisfied, and the school's reputation may be damaged. From the student's perspective, research into this decision-making process can also help school faculty and administrators better understand student priorities once at the school. For example, if students are drawn to the program because its strong industry connections, the school can make extra efforts to ensure the quality of those connections. Furthermore, knowing what factors influenced students to choose this program can help the school more accurately recruit students in the future. By knowing why students choose to come to MSIM, the school can ensure that the incoming students' expectations are realistic to what the school offers, as well as alter its marketing depending on the answers gained through the research.

Many existing research studies in this area examine school choice but use elements or variations of situations that are not a perfect match for the exact case we propose to study (Broder & Deprey, Kindle & Colby, Montgomery). For instance, hundreds of studies examine the effect of financial aid on school enrollment and choice. Others examine race, and others consider public vs. private institutions (Bezmen & Depken). But we have not been able to identify any single study that looks comprehensively at all factors that influence college choice.

Several of the reasons outlined above explain the reasons why no existing single research study attempts to measure all contributing factors. There are simply too many factors to measure. Statistically speaking, depending on the amount of data analyzed, it is likely that there will not be enough degrees of freedom to obtain a mathematically sufficient answer. Moreover, the aim of this study will be to observe and measure how a small, defined subset of factors contribute to any individual person's overall decision making process. According to Judith L. Stoecker (1991) in her study of *Factors Influencing the Decision to Return to Graduate School for Professional Students*, she examined how five variable sets (background characteristics, college characteristics, college experiences, work experiences, and attitudes toward graduate study) influence the decision to attend graduate school graduate study (p.

692). By replicating her research and various other studies with similar methodologies, the outcomes will provide insight into the motivations behind our iSchool cohort.

While investigating this topic there will be clear boundaries, establishing a scope for the investigation. Creating these limitations will ensure the research will not lose focus and become diluted with unnecessary information, while also specifying certain variables that inherently cannot be controlled nor factor into the graduate student's decision. For example, the iSchool can meet many of the needs of incoming students to the program, and can do so by changing factors such as the curriculum. However, the school cannot control every factor that could sway the student's mind, including the geography of the program or the business stronghold in close proximity to them. The goal of this exploratory research study will be to provide results explaining how to better understand and assess what factors lead to the student's ultimate decision.

# METHOD

Our research method and data collection employed a mixed-method approach, using both qualitative and quantitative techniques. We felt this approach would provide a better understanding of the research problem than either a quantitative or a qualitative approach could alone. We drafted an initial version of our survey questionnaire, conducted the interview portion of the study, and then used the information gathered in the interviews to refine the specific questions of the survey instrument. We then conducted the written survey and analyzed the results.

#### Sample Selection

For our research, we chose to study the current MSIM student population. This included members of not only the full-time first and second year class, but also students enrolled in the mid-career program. We recruited participants using the list provided by Professor Matthew Saxton.

To ensure we had a broad spectrum of experiences represented for the interview portion, we used a stratified sampling technique. We made sure to include at least one student of each gender, from the US, China, and India, from a computer science/engineering background, and from a social sciences/business background. These categories were not mutually exclusive (e.g. a female student from India who comes from a computer engineering background covers three of the qualifications listed). By not doing a random sample but carefully choosing participants based on certain qualities, we elicited a wide variety of diverse perspectives. We conducted interviews with 7 participants, for an interview response rate of 100%. Although this was not a representative sample of the MSIM population, we were hoping the interviews would help us understand what factors influenced all types of MSIM students' decisions to pursue this degree. The fact that it is not a representative sample of the overall population is a limitation, but we decided that the benefits to this method were substantial. For this reason, a stratified sampling technique was warranted.

Next, we conducted a written survey. We again used stratified sampling to ensure that all populations within the MSIM community were represented, especially a variety of both domestic and

international students. The survey was sent to 52 students. Because an online survey takes little effort to respond, and since we are surveying a highly technologically literate population, we expected most participants to be capable of completing the survey. The overall response rate for the survey was 60%.

For a larger-scale study, we would aim to study all students within the MSIM program, and would suggest that the study be conducted by school administrators. This would likely lead to increased participation and a higher response rate because students are more likely to respond to people of authority as opposed to peers. That said, a low response rate and self-selection bia could be issues even with a larger pool. To begin a larger-scale study, we would suggest increasing the number of students interviewed to reach a level of about 20% of all enrolled MSIM students, or approximately 40 interviewees. We believe that an interview participation group of 20% of all enrolled students would provide enough data to further refine the survey instrument, as discussed below. We would then follow the same study procedures described later in this document.

## Data Collection Procedures

The goal of our data collection was to help us better understand the factors that influenced MSIM students' decisions to pursue this degree at UW. Our research method and data collection was comprised of an interview and a survey. A detailed listing of our data collection and generation procedures is as follows:

- 1. Researchers drafted an initial written survey instrument
- 2. Identified potential interviewees
- 3. Contacted potential interviewees and asked if they were willing to participate
- 4. Conducted interviews
- 5. Analyzed the interview data
- 6. Edited survey instrument based on information collected in interviews
- 7. Identified potential survey participants
- 8. Sent survey to participants via email
- 9. Sent a follow-up reminder via email for survey participation
- 10. Completed a full analysis of survey responses

First, we constructed an initial draft of the interview instrument. Because all members of the research team had different reasons for choosing to attend the iSchool, we were able to pool our personal experiences and come up with a draft survey instrument that included about 30 different factors. We felt that our list was comprehensive, but decided to further explore these factors via a qualitative interview process.

We conducted 7 interviews to gain a deeper knowledge of the reasoning these individuals had for choosing the MSIM program at UW. Our hope was that the interviews would reveal rationales that we had not yet considered, giving us a deeper understanding that would help us refine our survey instrument. This method was also employed in order to reduce researcher bias in the development of

the survey instrument. Additionally, we felt this approach helped our research be reliable and objective when explaining and interpreting the findings.

The interview instrument is included in Appendix 1.

An open-ended card sorting technique was used, so the interviews were semi-structured in nature. This is further discussed in the validity and reliability section, below. The interviews were recorded and the written results were photographed. First, the participants were read a verbal consent agreement. This statement is included below in Appendix 4 and was read aloud by the researcher.

To begin the interview, the participants participated in a card sorting exercise. The first interview task was card generation. Each participant was presented with a stack of twenty (20) 3"x 5" index cards and was instructed to write down the main factors that influenced their decision to attend the MSIM program, listing one main factor per card. They were given three minutes to complete the exercise.

The next interview task was card ranking. Once the time had elapsed, each participant was asked to rank the factors from most important to least important by rearranging the cards on the table. The participant was given 2 minutes to complete this exercise. Once the participant ranked the cards, we asked "Why did you arrange the cards this way? Can you explain your choices?"

In a case where the interviewee wrote down a factor that was not clear, we asked them to elaborate using an inductive, open-ended questioning method. The elaboration stage took approximately 10 minutes, for a total interview time of roughly 20 minutes. This gave us enough time to adequately delve into the card topics, without risking participants losing interest or taking too much of their time. At the end of the elaboration stage, we asked the participant if they have any questions for us, the researchers. While the participant was still in the room, we photographed the top of the table, showing the arrangement of cards. This increases reliability as there is little ambiguity in how to interpret the rankings portrayed in the photographs. We then thanked the participant for their time and concluded the interview.

To examine the information gleaned from the interviews, we used a qualitative approach. The participant's ranking of the factors mostly spoke for itself, so we simply examined this textual data to see if there were patterns among the individuals we interviewed. The overarching goal of the interviews was to refine the survey instrument, so we paid attention to the overall trends and patterns displayed by the interviewees as a group, not to the detailed individual responses. We examined the number and types of factors that participants listed. Ultimately, the factors mentioned in the interviews closely corresponded to the initial draft survey instrument, so we chose not to modify the survey instrument. We will discuss this further in the results section. The interview data confirmed our initial work.

Next, we conducted the written survey. The goal of the written survey is to gain further knowledge about the factors that influenced participants to choose the MSIM program, as well as to gain more information about any identified gaps or areas that that were not covered thoroughly enough during in the interviews. The survey was administered online via Google Forms and was sent out to a stratified sample of 52 students, as explained above. The survey took approximately 20 minutes for participants to complete, and was 28 questions long. We feel this length was sufficient to inform us of the most commonly mentioned factors, but short enough that students wouldn't abandon the survey. The survey consisted of a 1-7 Likert scale, 1) being not important and 7) being critically important, with an additional 8th choice if a participant had not considered the factor. With numerical scales, a greater number of numbers to choose from increases reliability. We felt that 7 is sufficiently high, without over-granulating the options given to respondents regarding their opinions. The scale was balanced with 4 being the midpoint. In order to avoid the halo effect, we broke up the questions onto multiple pages. We did not want to show a single question per page because that would be overly difficult for participants, so we opted to have approximately 10 questions per page. The survey instrument is available in Appendices 3, 4, and 5.

Once the survey had been sent out and students had been given five days to respond, we sent a reminder email. We then waited five more days to begin data analysis. The large research question of "Why do students choose to attend the MSIM program at the UW's iSchool" was largely explored in the interviews and through comparing which questions had the greatest number of indicators as important, and the secondary questions answered by the survey and cross-tabulation/chi square analysis. This is discussed in the results section of this paper.

#### Validity and Reliability

Although our sample size was narrow in scope (only a fraction of the MSIM population), our analysis produced distinct quantifiable measurements. These measurements provided estimates from a sample that can be related to the entire MSIM population. We can then infer generalizations from the group of participants and begin to understand their reasoning for choosing the MSIM program. This helps us understand collective student body's reasons for choosing the MSIM program.

The factors studied were overwhelmingly about the thoughts, feelings, and reasoning behind the participant's decision-making. These are abstract and subjective points, lending themselves to a qualitative approach. We were also observing their actions and mentality regarding their decision-making to find out if there were any patterns to be aware of from the group. Due to the nature of the data collection, the interview data is less valid and less reliable than the survey data, but we believe that for this type of qualitative data, the inferences are both valid and reliable.

This card sorting exercise was designed to empower participants and aims to avoid researcher bias that might be introduced via a structured questioning method. The interview began with open-ended questions and researchers asked clarifying questions only when necessary.

We have chosen this method because:

*Prevention of interviewer bias:* We started with an exercise that gave participants the freedom to generate what unique factors played a role in their decision. By allowing them to come up

with the topics, we aimed to avoid leading questions that would only reflect our preexisting knowledge.

*Non-Verbal information gathering:* We gained information about the relative importance of certain factors over others. If a participant wrote down three factors quickly, and struggled to come up with the other two, we knew that the first three were likely more important. Likewise if a participant struggled with ordering their cards, we gained knowledge that the factors may have been of a similar importance to the participant.

*Reliability:* This method helped keep our reliability high by reducing the amount of judgements the interviewers needed to make. Because the participants wrote the cards directly, it left little to interpretation, increasing reliability.

Although we feel the benefits outweigh the limitations of this technique, those limitations are:

*Limited responses:* By having participants write down their responses, it necessarily limited their answers to things that are easily described in short phrases. Because we were working with a well-educated population, we believe that the participants were be able to come up with a summary description, but this may not have been the case.

*Reliance on language skills:* Not all participants were native English speakers. Because the exercise was timed, the number and scope of factors written may have been limited for participants whose language skills were not as strong.

*Risk of disingenuous answers:* There was a risk that participants might not answer honestly, particularly if they considered any of the factor to be embarrassing (e.g. inability to be admitted to other academic programs).

In conducting a large-scale version of this study, these same issues of validity and reliability would be relevant. We do not foresee a larger study being more any better equipped to address these topics, and believe that we have addressed them as fully as possible even though the scope of our work is limited.

#### Ethical Considerations

To ensure we gained informed consent, all participants (both interviewees and survey respondents) read a consent form and agreed to participate in the study. The consent forms are included in Appendix 4 at the end of this document. To ensure anonymity and confidentiality, all participants were assigned a unique identifier for use by the research team. Names were not used.

The other main ethical issue we faced is that sensitive issues may have arisen, causing participants to feel uncomfortable revealing information. To minimize the harm from addressing personal topics like money or race, participants were given the option to refuse to answer any questions they didn't feel comfortable answering, both in the interview and in the survey. For the card sorting exercise, our

questioning was limited to what the participants chose to write down, giving them the power to avoid discussing anything that made them feel uncomfortable.

Additionally, we took photographs of the finished card responses. These photographs are available in Appendix 6. We asked for consent to take the photographs at the beginning of the interview, and we took the photographs while the participant was still in the room, providing a second opportunity for the participant to provide consent. All participants allowed us to take photos of their written work.

#### RESULTS

#### QUALITATIVE CARD SORTING INTERVIEWS

For our interview, our card sorting method made it quite easy to manage the data and code. Because we were primarily focused on the written work, we used the cards, rather than what was said as our data. We planned to use the interview as a confirmation of the accuracy and completeness of our survey instrument, so we used a codebook with the same general structure as our survey. Having created the code before the interviews, we risked bias in trying to get the data to fit into our preconceived codebook. However, because the purpose of our interviews was to test whether our survey was exhaustive, we felt it was necessary to use the instrument itself to measure against. We used the following codes to apply to the written work. Because we created our code *before* we did the interviews, we were able to ask clarifying questions- ex. "flexibility" meant interdisciplinary to most participants once asked to clarify. One person coded all of the cards to ensure interrater reliability, and make sure the results are consistent. Below is the code, with the number of cards tagged with that code in parenthesis (some cards received multiple codes, some people listed multiple cards that fit under the same code, and one card did not fit our code. This exceptional response, "Positive iDay Experience," was not added to the survey instrument as it had only been mentioned once. One person coded all of the cards to ensure interrater reliability and make sure the results are consistent.

Overall, only 1 of the 49 cards we received didn't fit within our code derived from the survey instrument, and therefore we felt confident no changes needed to be made to it.

1.	Geographi	с		i.	Multidisciplinary/Variety of Classes (7)
	a.	US		i.	Want Management Skills (1)
	b.	Seattle (8)		k.	Want Technical Skills (1)
	с.	Weather/Climate		L.	Want skills in Field Not Previously
	d.	Pacific Northwest (1)			Studied (2)
2.	Diversity			m.	Want skills in a Field Previously Studied
	a.	Language of Instruction			(1)
	b.	Diversity of Student Population (1)	5.	Industry/Jo	obs
3.	Personal			a.	Industry Recognition of Program
	a.	Family (1)		b.	Work Opportunities After Graduation (3)
	b.	Significant Other/Spouse (1)		с.	External Work Opportunities Before
	с.	Friends (3)			Graduation
4.	Academic			d.	Industry Connections to Specific
	a.	Type of Degree (MS) (1)			Organizations (1)
	b.	Program Length -2 years	6.	Financial	
	с.	Subject Areas/ Field of Study (6)		a.	Tuition/Program Cost (1)
	d.	Management/Professional Emphasis (1)		b.	Scholarships/Funding Availability (2)
	e.	Academic Connections/Professors (4)		с.	Cost of Living in Seattle
	f.	Prestige- UW (4)		d.	Internal Work Opportunities at UW
	g.	Prestige- iSchool		e.	Minimum Wage
	h.	Prestige- MSIM			

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#### QUANTITATIVE ANALYSIS OF SURVEY DATA

Once we felt confident that our instrument was able to consistently get at a wide variety of the most important factors considered by iSchool students, we were able to conduct our survey. We had two research questions to answer, and the statistical analysis required for the two varied.

For the first, "Which factors do students consider to be most important for making their decision to attend this program?," we used histograms and descriptive statistics of each question's responses to compare which factors tended to be rated most important.

For the second "How do a student's personal qualities (e.g. nationality, academic background, gender) influence what factors they consider important in their decision to attend MSIM?," we used a chi squared/cross tabulation to see if there were any trends or associations between a factor and gender/nationality. We will go over the results of these tests below, but we followed this general procedure for all of our tests.

We used .05 as critical value to avoid a type II error, (accepting null hypothesis when false).

All of our tests were set up with the following hypotheses:

We calculated the following degrees of freedom:

For nationality, we had 12 degrees of freedom (7 choices -1)x(3 nationalities -1)

For gender, we had 6 degrees of freedom (7 chouces-1)x(2 genders-1)

Then we ran cross tabulations and got our chi-squared value. If this number is greater than the critical value of chi-square associated with the number of degrees of freedom, then we reject our null hypothesis. Else, we accept our null hypothesis.

Our analysis starts with the first question of what factors were most significant in MSIM students' decision making processes.

Before beginning, we planned to take out any cases where a participant didn't respond to any questions, or if any single question was only answered by less than four participants, but we didn't have any cases that fit these descriptions. Next we began by taking the median and mode of each question, answered on a scale of 1 being not important at all, 7 being critically important. We used medians because the importance ranking is an ordinal variable. We then constructed a histogram for each question to get a general idea of the shape of the distribution of results.

The factors with the highest medians of 7 were (Modes listed in parentheses):

Geographic Location- US (7) Geographic Location- Seattle (7) Language of Instruction- English (7) Degree/Subject Areas Studied (7)

Multidisciplinary Nature of Program/Variety of Classes (7)

Work Opportunities after Graduation

The factors with the lowest medians of 3 or less (Modes listed in parentheses):

Personal Factors- Family (Median: 2.5, Mode: 1)

Personal Factors- Significant Other (SO) /Spouse (Median: 1, Mode: 1)

Personal Factors- Friends (Median: 2, Mode: 1)

Minimum Wage in Seattle (Median: 3, Mode: 1)

Another way to understand these factors is through the six categories our survey was divided into.

Overall the categories that were **most** important were **Industry/Job** (medians 6, 6, 6.5, 7), **Academic** (medians 5, 5.5, 6, 6, 6, 6, 6, 6, 6, 6, 6, 7, 7), **Diversity** (medians 6, 7) and some factors of **Geographic** (medians 4, 5, 7, 7). The **least** important categories were **Personal** (1, 2, 2.5) and **Financial** (3, 4, 4, 5, 5).

Additionally, for many of our highest rated factors, 8 (I did not consider this factor) is rated high as well. We will address why this might be in our discussion section.

With these overall results in mind, we looked more in depth at these categories and with attention to the second question of how demographic traits might influence answers.

#### Geography

The geographic factors category contained two of the highest rated factors- Seattle and the United States. The other two factors show a wider distribution, with much less concentrated around the median. This is supported by the fact that the median and modes of these two factors are different.



We ran cross tabulations and calculated chi square values for US and Seattle for both gender and nationality.

All of the factors we calculated showed no significant association between the demographic characteristic and the ranking a factor as important.

Seattle vs. Nationality	US vs. Nationality
df=12	df=12
p=0.131	p=.914
Chi-square=17.53	Chi-square=6.03
Accept null because 17.53	< Accept null because 6.02<
critical value of 21.03	critical value of 21.03
Seattle vs. Gender	US vs. Gender
df=6	df=6
p=.765	p=.765
Chi-square=3.34	Chi-square=3.34
Accept null because 3.34< critical value of 12.59	Accept null because 3.34< critical value of 12159

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## Language of Instruction- English





#### Diversity

We had two diversity factors, one of which, language of instruction, was one of our most important factors. Looking at the distributions, it is obvious that in that factor a significant amount of the data is clustered around the median and mode of 7. The factor of diverse student population still has a high median of 6 and a mode of 7, but is less left skewed and less concentrated than language.

Diversity vs. Gender	Diversity vs. Nationality				
df=6	df=12				
»- 7C	p=.843				
μ=.76	Chi-Square=7.21				
Chi-square=3.34	Accept null because				
Accept null because 3.34	< 7.21< critical value of				
critical value of 12.59	21.03				

We compared how gender and nationality might be associated with highly rating a diverse student population. We found that neither nationality nor gender showed an association with the importance placed on a diverse student population.

#### Personal

Personal factors was the lowest rated category in terms of importance to student decisions. They all had a mode of 1, (rated not important at all), and had medians of 1 (SO/Spouse), 2 (friends), and 2.5 (family). They showed a right skew in their distributions.

SO/Spouse vs. Gender	SO/Spouse vs. Nationality
df=6	df=12
p=.658	p=.15
Chi-square=4.14	Chi-Square=16.76
Accept null because	Accept null because
4.14< critical value	16.76< critical value
of 12.59	of 21.03

We tested one factor, Significant Other/Spouse for an association with gender or with nationality.

Because we accepted

both our null hypothesis, we found that there is no association between whether someone named a significant other or spouse as an important factor and nationality or gender. Personal - Family







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## Academic



The academic category was the largest category with 13 factors within it. Most factors in the category rated highly (the category itself has a median and mode score of 6), with medians ranging from 5 to 7. The distributions tend to be right skewed, although for some the data is more evenly distributed (ex. Field of Study vs. Learn Managerial Skills).

Multidisciplinary vs. Gender	Managerial Skills vs. Gender	Technical Skills vs. Gender	We ran a cross
df=6	df=6	df=6	tabulation/chi cauaro
p=.551	p=.586	p=.807	labulation/cni-square
Chi-Square=4.947	Chi-Square=4.68	Chi-Square=3.01	test for three different
Accept null because 4.947<	Accept null because 4.68<	Accept null because 3.01<	factors, multidisciplinary
critical value of 12.59	critical value of 12.59	critical value of 12.59	· · · · · · · · · · · · · · · · · · ·
Multidisciplinary vs. Nationality	Managerial Skills vs. Nationality	Technical Skills vs. Nationality	nature of the program,
df=12	df=12	df=12	want to learn managerial
p=.990	p=.351	p=.98	skills, and want to loarn
Chi-Square=3.61	Chi-Square=13.252	Chi-Square=4.18	Skills, and want to learn
Accept null because 3.61<	Accept null because 13.252<	Accept null because 4.18<	technical skills.
critical value of 21.03	critical value of 21.03	critical value of 21.03	

Like our other results, we also found no association between any of these factors and gender or nationality.



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# Industry/Jobs

Industry/Jobs was one of two categories with no question within it ranking below a 6 on the 1-7 scale (the other being diversity). All four questions showed a high left skew, with concentrations around the higher rating levels. The factor 'work opportunities after graduation' had the highest concentration in one response (its mode of 7) out of all of our questions.







We ran cross-tabulations/chi square tests to see if there was an association between importance ratings of 'work opportunities after graduation' and gender/nationality, and found no association.



# Financial

Our last category is financial factors. Our research showed that the only category less important to MSIM students than financial factors were personal factors. Overall, the histograms tended to be fairly evenly distributed (Cost of Living, Scholarship Availability), or slightly skewed (Tuition Cost to left towards more important, Minimum wage to the right towards less important).

We did a cross tabulation/chi square test and found there was not a statistically significant association between

tuition/cost and gender/nationality.

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8 6 4 2	(	7	ost	4	fL	_iv	rin	g	4	S	e a	tt	4	2	
		C o	ost	4	f L	_iv	rin	g	4 4	S	4	tt	4	2	
		C 0	ost	4	f L	_iv	rin	g 5	4 5	S	4 6	tt	4 7	2	

Scholarship Availability

Cost vs. Nationality	C
df=12	
p=.61	
Chi-Square=10.04	
Accept null because 10.04<	
critical value of 21.03	

Cost vs. Gender df=6 p=.30 Chi-Square=7.23 Accept null because 7.23 < critical value of 12.59

## DISCUSSION

Overall, the evidence suggests that the most important factors students consider before choosing to come to the iSchool at the University of Washington are work, academic, and diversity factors. As listed in our results section, the data shows that most important factors were Geographic Location- US, Geographic Location-Seattle, Language of Instruction- English, Degree/Subject Areas Studied, Multidisciplinary Nature of Program/Variety of Classes, and Work Opportunities after Graduation. The least important were Personal Factors- Family, Personal Factors- Significant Other (SO) /Spouse, Personal Factors- Friends, Minimum Wage in Seattle. Generally, geography, academics and jobs seem to be the matter the most, and personal and financial factors matter the least.

For our second question, how might different demographic characteristics influence what factors a student considered important, we considered nationality and gender as our two demographic characteristics. We looked at nine different factors, at least one from each factor category, and tested for any association between the characteristic and the factor. We used a .05 significance level, to avoid a type II error of too easily accepting our null hypothesis. In all 18 tests we ran, we found that no factor/characteristic combination showed any statistically significant association.

While this study presents insight into the factors considered in making this decision, there are several limitations we should consider. The first is that through our interview process, we learned that students have many different ways of explaining similar factors. For example, many students considered the multidisciplinary nature of the program, but we got a variety of answers alluding to this, including "different classes," "flexibility," and "types of classes." It was only through questioning that we were able to determine that they all meant the same thing. While we tried to write our questions in the clearest possible wording, it is possible that students might have found them unclear or different from how they would describe the same factor. This may have made our results less valid if participants were unsure what questions were asking.

Related to this, there seemed to be a trend that many of the questions with higher medians and modes tended to have a high number of 8s- "I did not consider this factor at all." Examples of this are seen in the Geographic- US factor and the Language of Instruction- English factor. There might have been confusion here because students might have considered a factor as a given, not thinking about it explicitly, but implicitly shaping their decisions on school choice. In a full scale study, we could have asked about the scope of considerations students made, for example, "Did you only apply to schools in the US."

Another point of confusion might have resulted from our scale used on our survey instrument. We used a Likert 7-point scale ranging from 1-Not important at all to 7-Critically important, with 8 being -I did not consider this factor at all. The difference between a 1, where the factor was considered but deemed unimportant, versus an 8, where the participant never considered the factor at all, may have been unclear. In future studies, we would more explicitly state this difference.

A second source of error might have come from our limited sample size. Our sample for the survey was only 31, which is too small of a small sample to draw any major conclusions. Although we don't know the

demographic makeup of the MSIM population as a whole, it would appear that our sample had fewer students of Chinese nationality than the population would suggest we should have had.

One limitation of our analysis for the second of our research questions is that we only tested two demographic characteristics. While we felt these two were among those more likely to have a difference, there is a chance that there were factors we didn't run tests for (or even ask participants) that may have had a statistically significant association. Other factors we could potentially test for include age, academic background, marital/relationship status (potentially important for the personal category of factors), years of work experience, or prior salary.

If we were conducting a larger-scale version of this study, we would first aim to conduct more interviews in order to further refine the survey instrument. One goal would be to conduct interviews with 20% of the entire population, which would be achievable for a population this size. Ideally, the interviews would reveal more information and would bring to light any additional factors that were pertinent. In creating the survey instrument for a large-scale study, we would include these additional factors and would add more demographic questions.

The factors answering our first research question of why MSIM students choose this program at UW's iSchool can be applied by the iSchool both for marketing and for maintaining student satisfaction with the program. Knowing the key reasons why students end up coming to MSIM will help the school be able to focus their marketing on those key reasons. For example, in knowing that students value work opportunities after graduation, the iSchool might choose to highlight student post-graduation employment positions as part of a marketing campaign. Another benefit to the iSchool in knowing what factors cause students to choose the MSIM program is being able to meet those expectations to keep student satisfaction high. An example of this might be if they know that students value the multidisciplinary approach of the program, they would be hesitant to locking students into a certain specialization or track of classes.

For the second part of our research question, even though we didn't find results suggesting that gender or nationality played an important role in shaping decision making, it perhaps is even more interesting that there was no statistical difference. The MSIM program is a very diverse student body, made up of students from around the globe. Yet our results show that regardless of location or gender, students choose the program for the same reasons. It is a powerful conclusion to suggest that MSIMers share common goals and values, and the iSchool can use this information to help students connect with one another based on a common ground of all having chosen to come here for the same reasons. Another purpose the iSchool could use this research for is to inform marketing decisions. If students share the same motivations for coming to the program regardless of nationality or gender, it could save money by not needing to devise individualized marketing targeted at those demographics specifically. We believe that our research can help the iSchool improve its marketing, helping further refine student expectations, which will determine student satisfaction with the degree program.

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# **APPENDIX 1: INTERVIEW INSTRUCTIONS FOR INTERVIEWERS**

Instructions provided to interviewers are as follows:

# 1. Introduction and statement of consent

Please read the following aloud and gain verbal consent from the interviewee:

You are being asked to take part in a research study about why you chose to attend the MSIM program at UW. To participate in this study, you must be a current full-time student who is actively enrolled in the MSIM program.

If you agree to take part in the study, we will conduct an interview with you shortly. We will ask you about the factors that led to you choosing this graduate program. The interview will take about 20 minutes to complete.

We are also asking for your consent to us recording your voice, and your consent for us to photograph your responses. We will not photograph you as a person; we will only photograph your written work.

There is a risk that you may consider some of the questions to be sensitive in nature, but we do not anticipate any risks greater than those typically encountered in conversations among friends. At any point in the interview, you may refuse to answer any questions you are uncomfortable with.

There are no direct benefits to you. As compensation, you will be entered into a drawing for a chance to win a Starbucks gift card. This drawing is administered by Professor Saxton. If you are currently a student enrolled in IMT 570, there will also be the opportunity for you to obtain extra credit points for the course.

The answers you provide in this study will be kept confidential. During the interview, you may elect to not answer any of the questions, and you are free to stop participating at any time.

The researchers conducting this study are Ashley Lindsey, Eric Saltz, and Nina Showell, under the supervision of Professor Matthew Saxton. If you have questions at a later time, you may contact either us or Professor Saxton. Our contact information is available in the iSchool Directory, which you have access to online.

"Do you agree to take part in this study?"

2. First Interview Task: Creation of Cards

Count out 20 index cards and give them to the participant. Give the participant a pen.

(Read aloud): "Please write down the main factors that influenced your decision to attend the MSIM program at UW. List one factor per card. I've given you 20 cards, so you may write down up to 20 factors, but you don't need to use all of the cards. You will be given approximately 3 minutes, so please work quickly without worrying about writing down the specifics. We're simply looking for the main ideas."

Set response time of 3 minutes; encourage participant to write 5+ factors if needed.

3. Second Interview Task: Ranking/Sorting of Cards

(Read aloud): "By rearranging the cards on the table, please rank these factors from most important to least important. You will be given 2 minutes to complete this exercise, so please work quickly. Once you have made your selection, we will discuss it."

Set response time of 2 minutes; encourage participant to work quickly.

# 4. Third Interview Task: Explanation of Sorting/Ranking

(Ask aloud): "Why did you arrange the cards this way? Can you explain your choices?"

If needed, ask more open ended questions: "Why is this factor important?" "Why is this ranked highest?" "Why is this ranked lowest?" "Why is this factor not important?"

5. Conclusion of Interview

(Ask aloud): "Do you have any questions?"

(Ask aloud): "May I photograph your work?

If yes, take photograph while participant is still in the room. Do not show the photograph to the participant unless they specifically request to review it.

Thank participant for their time.

# **APPENDIX 2: INTERVIEW SCHEDULE**

Interview time: 20 minutes, and ideally scheduled in 30 min time slots to allow for extra time/breaks

Participant 1: Interview conducted on 11/17/2016 at 6:00pm Participant 2: Interview conducted on 11/17/2016 at 6:30pm Participant 3: Interview conducted on 11/22/2016 at 12:25pm Participant 4: Interview conducted on 11/22/2016 at 12:50pm Participant 5: Interview conducted on 11/22/2016 at 1:15pm Participant 6: Interview conducted on 11/22/2016 at 4:30pm Participant 7: Interview conducted on 11/22/2016 at 5:00pm

# **APPENDIX 3: SURVEY QUESTIONNAIRE - INITIAL EMAIL**

The email message sent to survey participants was as follows:

Hello!

Would you like to know why MSIM students decided to join the program?

You have been selected to participate in a survey about why students select the MSIM program for graduate study. The purpose of this study is to identify decision-making factors that students use when selecting their graduate program and areas the iSchool can continue to focus on or improve in their marketing of the program, enticing students to join.

Your time and responses are both extremely important for our study. Hence we have an online survey (link provided below) that will take around 10-15 minutes to complete. We hope you will take part! To take the survey and learn more, please visit: <u>Why MSIM? Survey</u>.

Disclaimer:

- Participation in the study is entirely voluntary, you are free to opt out at any stage.
- · No personal data will be stored without your permission. We respect your privacy.

Thank you so much for taking the time for this email and the survey. Hope you will be a part of this study.

Thank you for your time! Ashley, Nina, and Eric

# **APPENDIX 4: SURVEY QUESTIONNAIRE - CONSENT PAGE**

The survey questionnaire was as follows:

**MSIM Student Survey** 

What factors led MSIM Students to select this program?

This is a survey to explore the reasons behind MSIM students decision to join the iSchool. It should take approximately 10 minutes to complete. This survey is being conducted as part of a research project for the IMT 570 course. However, the data obtained from you will be combined with data from others, and your individual responses will not be specified.

Your participation in this survey is voluntary. You may refuse to take part in the research or exit the survey at any time without penalty. You are free to decline to answer any particular question you do not wish to answer for any reason.

There are no foreseeable risks involved in participating in this study.

The survey is anonymous. We do not record your UW NetID or student ID. IP addresses are not logged on the server.

If you have questions at any time about the study or the procedures, you may contact me at ehsaltz@uw.edu

ELECTRONIC CONSENT: Please select your choice below. You may print a copy of this consent form for your records. Clicking on the "Agree" button indicates that

You have read the above information

You voluntarily agree to participate

[Agree button]

# **APPENDIX 5: SURVEY QUESTIONNAIRE - QUESTIONS**

The survey questionnaire was as follows (consent form is included above in Appendix 4):

Please consider the following factors in terms of their importance for why you chose to attend the MSIM program at UW.

Not important(1)...(2)...(3)...(4)...(5)...(6)...(7)Extremely Important; (8) I did not consider this factor

Geographic preferences - Country: United States Geographic preferences - Weather/Climate in Seattle Geographic preferences - City- Seattle Geographic preferences - Region- Pacific Northwest Language of Instruction Diverse nature of student population Personal factors - family Personal factors - spouse/significant other Personal factors - friends Program/Degree Type (Master of Science) Program Length- 2 years Degree area / subjects studied Management/professional emphasis of the degree Academic connections / professors School prestige on a university level- the UW as a whole School Prestige on a school level - the Information School School Prestige on a program level - the MSIM program Variety of classes available / multidisciplinary nature of the program (e.g. wanted to take data science classes even though this is not a data science-specific program) Wanted to learn managerial skills Wanted to learn technical skills Wanted to learn new skills in a subject I had not previously studied

Wanted to broaden existing skills in a subject I had previously studied Industry recognition of the university/school/program Work opportunities after graduation External work/internship opportunities (outside of UW) prior to graduation Industry connections to specific companies or organizations Tuition rate / Program cost Scholarships and funding availability Cost of living within the Seattle area Minimum wage offered in the Seattle area Internal work/internship opportunities (work conducted at UW) prior to graduation (Next Page) How many programs did you apply to? If you applied to programs other than MSIM, please name which ones you did apply to. (Free response) Are there any other factors you think we should consider? (Free response) (Next Page) Gender (Male/female/ other/ prefer not to answer) National origin/country (Free response) Year in school (FT: 1st year / FT: 2nd year / Mid-Career Program) Age in years (free response)

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# **APPENDIX 6: INTERVIEW RESPONSES - WRITTEN WORK**



Photo 1. Participant 1

Photo 2. Participant 2



Photo 3. Participant 3



Photo 4. Participant 4



# Photo 5. Participant 5



Photo 6. Participant 6



Photo 7. Participant 7