

Factors that influence voluntary participation in a graduate professional student ETD project

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ABSTRACT

Background: The origins of the [Yale Medicine Thesis Digital Library](#) were presented at [ETD2003](#). Participation and depositing of electronic copies of theses has proceeded for the past three graduation years (2002-2004). Participation has ranged in each year from 5-10% of the graduating class. A variety of hypothetical explanations exist for the modest level of participation. **Methods:** 2005 Yale School of Medicine graduates received a survey invitation, distributed by email or requested during in-person encounters during May, 2005. Survey results were collected and merged into an Excel™ spreadsheet, and charts were produced to report response totals, average (mean) response, and variance for the range of responses to a particular statement. **Conclusions:** 37 responses (47% of those invited to participate in the survey) were collected between May 9 and May 24, 2005. Analysing survey results, the proportion of students intending to deposit their ETD demonstrates a consensus of readiness to participate in an electronic thesis repository, but considerable variation in response patterns do not suggest uniform student concern about the best way to make an informed participation choice.

1. INTRODUCTION

The origins of the M.D. thesis at the Yale School of Medicine(Forrest) and the [Yale Medicine Thesis Digital Library](#) (YMTDL) (Belanger, Mayman, & Greenberg, 2003) were presented at [ETD2003](#).

A wide choice of M.D. thesis subjects for research is permitted. Research must be designed by the students themselves and conducted over their entire student career. Each student works closely with a specific faculty research mentor. The student-mentor collaborative experience at Yale also has a high probability of producing a scholarly research paper submission to a leading peer-reviewed biomedical journal. The final approved and written thesis is presented to the Medical School Office of Student Research. An Awards Committee critiques and ranks all student theses submitted for honors. The highest ranked papers are presented in a Student Research Day program chaired by the Dean of the Medical School, and graduation prizes are awarded for outstanding student research.

In 2002, the Cushing/Whitney Medical Library and Office of Student Research agreed to facilitate the voluntary decision of graduating students to deposit an electronic copy of their thesis in the new digital repository. A participation form allowed students to designate their distribution requirements and public release date of their thesis text to accommodate a journal article's submission and acceptance.

Participation and depositing of electronic copies of theses has proceeded for the past three graduation years (2002-2004). Participation has ranged in each year from 5-10% of the graduating class. A variety of hypothetical explanations exist for the modest level of participation. Increasing participation is dependent on addressing student motivations, questions, or concerns. A brief opinion survey of spring 2005 graduates could provide a basis for considering changes in presenting the benefits, risks, and opportunities for participation. In the spring of 2005, the project team agreed to present a brief survey to graduating students to form a better understanding of how many students actually consider participation and what factors influence their decision to deposit an electronic copy in YMTDL.

Approximately one month prior to undertaking the survey (April 13, 2005), the targeted student population received an email request to participate in the project and deposit their thesis in YMTDL. No mention was made of the impending survey, but the hope was that some level of student thought, consideration, or inquiry would take place and provide the background necessary to respond to the survey. Only one student inquiry was received as a result of this invitation to participate.

2. METHOD

A brief opinion survey requesting a 5-point likert scale response to 6 opinion statements was created on paper and on the web with [Survey Monkey™](#). The web survey announcement was sent to 79 graduating medical students expected to submit their thesis in the spring of 2005. Survey responses were also solicited directly in person from students during the student research day scientific poster session on May 10, 2005. No student identifying characteristics were tracked or analyzed, and in-person respondents were asked to ignore the web survey email invitation.

1. Please respond to this survey about participation in the Yale Medicine Thesis Digital Library

1. Is this the first time you are responding to this survey? (if no, you do not have to continue)

Please Select Yes No

2. I intend to deposit my thesis in the Yale Medicine Thesis Digital Library.

Strongly Disagree Disagree Undecided Agree Strongly Agree

Please select best single answer:

3. It is hard to decide while I am in the process of submitting my thesis.

Strongly Disagree Disagree Undecided Agree Strongly Agree

Please select best single answer:

4. The complexity of the participation form discourages participation.

Strongly Disagree Disagree Undecided Agree Strongly Agree

Please select best single answer:

5. The participation form is necessary to protect my intellectual property interests.

Strongly Disagree Disagree Undecided Agree Strongly Agree

Please select best single answer:

6. Earlier knowledge of participation would have assisted my decision process.

Strongly Disagree Disagree Undecided Agree Strongly Agree

Please select best single answer:

7. Earlier knowledge of copyright would have assisted my decision process.

Strongly Disagree Disagree Undecided Agree Strongly Agree

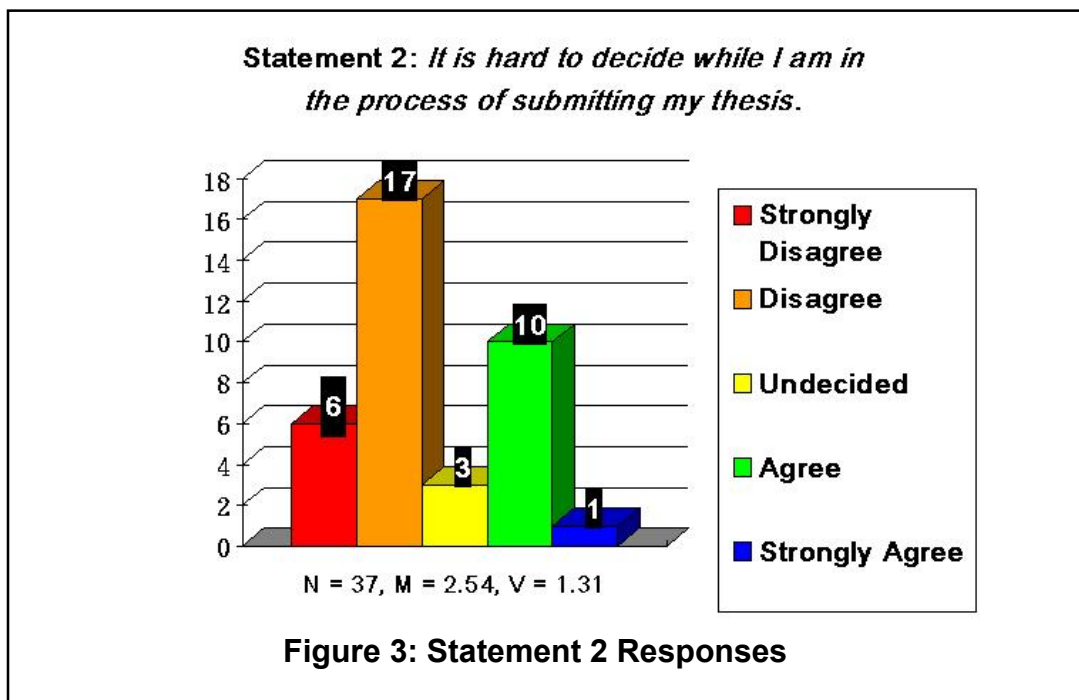
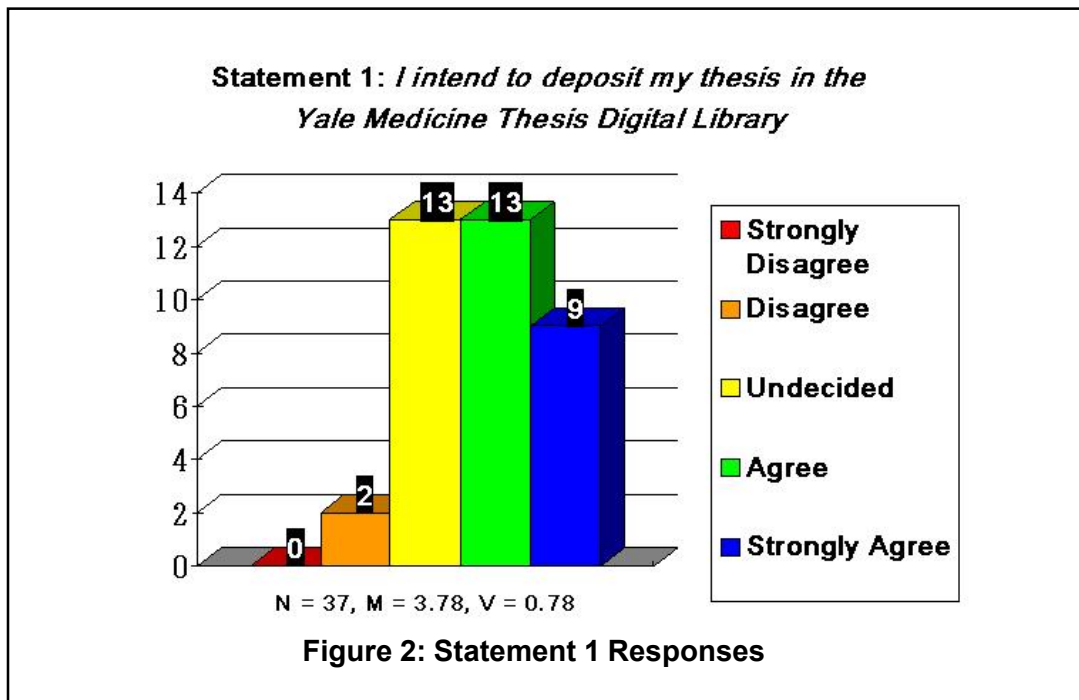
Please select best single answer:

Figure 1: Survey Questions and Response Scale

3. RESULT

37 responses (47% of those invited to participate in the survey) were collected between May 9 and May 24, 2005. 28 responses were submitted through the web-based survey, while 9 sets of responses were collected on May 10, 2005, during a [Student Research Day](#) poster session. Charts were produced to compare response totals (N) , average (M)

response, and variance (V) for the range of responses to a statement. A chart was prepared with survey results for each statement:



Statement 3: *The complexity of the participation form discourages participation.*

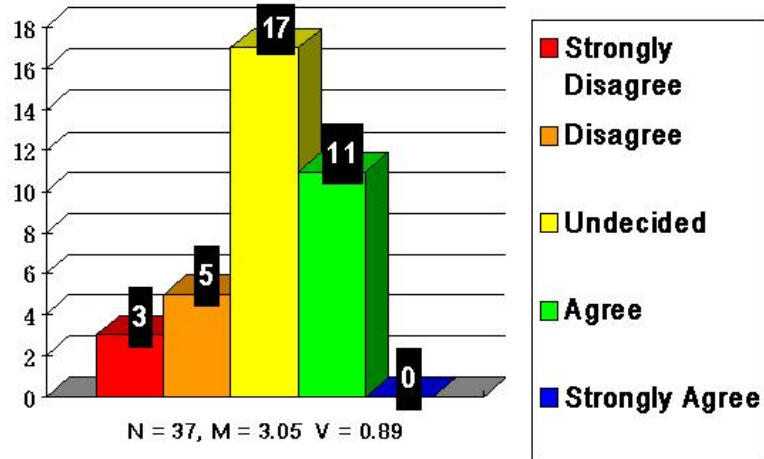


Figure 4: Statement 3 Responses

Statement 4: *The participation form is necessary to protect my intellectual property interests.*

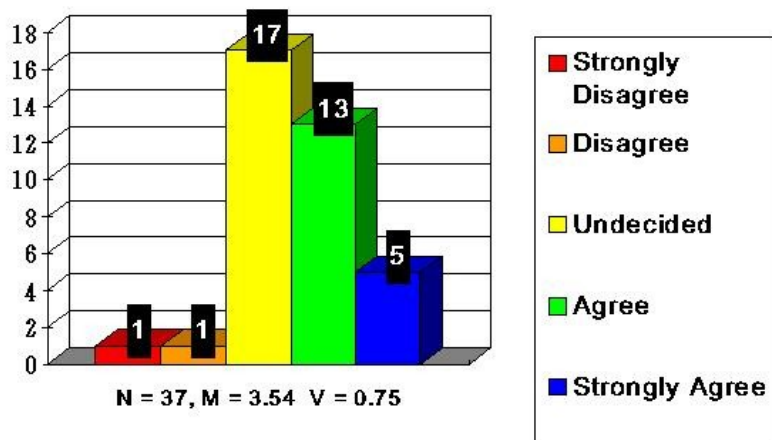


Figure 5: Statement 4 Responses

Statement 5: *Earlier knowledge of participation would have assisted my decision process.*

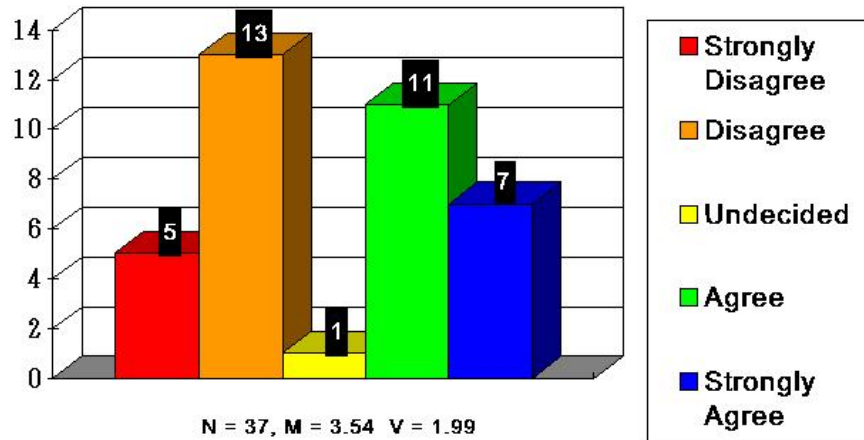


Figure 6: Statement 5 Responses

Statement 6: *Earlier knowledge of copyright would have assisted my decision process.*

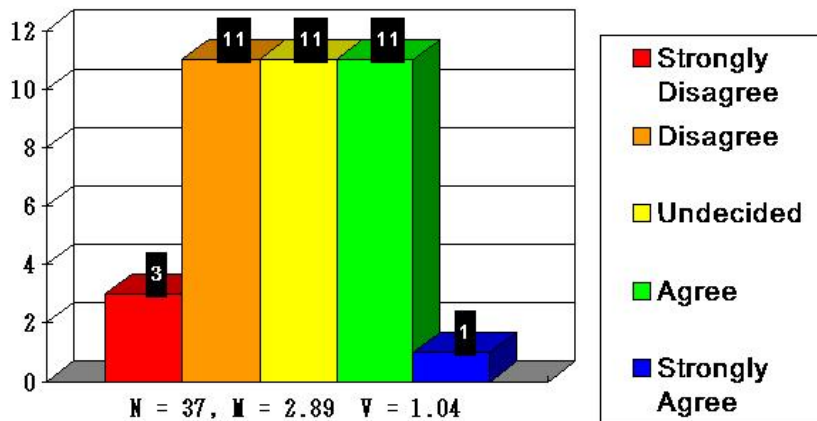


Figure 7: Statement 6 Responses

4. DISCUSSION

The responses to the Statement 1 (Figure 2) indicate that a significant proportion of students are either intending to deposit their thesis or are at least still open to the possibility. The variance is less than most of the questions. The proportion of “strongly agree” opinion is higher than for any of the other statements.

The majority of Statement 2 (Figure 3) responses contradicted the hypothesis that the confluence of thesis submission activities made it any more difficult to weigh the choice of whether to participate.

The large proportion of “undecided” responses to Statement 3’s (Figure 4’s) proposition that the complex participation form inhibited participation was probably due to the fact that many students had not seen the participation form, even though a direct link to the form was included in the April participation email. Several of the in-person survey subjects mentioned that as their motivation for choosing “undecided.” Considering the responses besides “undecided,” there are indeed a high proportion of responses that indicate the current form is too complex. As the [YMTDL Participation Form](#) is designed to record student choices and obligate the Project’s to respect those choices, education on filling out the form might yield less sensitivity to complexity.

The analysis of Statement 4 (Figure 5) responses to an assertion that a student should care about their thesis as intellectual property tended to form a significant proportion of agreement, though the most popular response of the respondents was again “undecided.”

Statement 5 (Figure 6) responses produced the greatest internal variance and the smallest number of “undecided.” This statement focused on the value of having earlier knowledge prior to the deciding point for participation, and it would be expected that some students would remember the email they received a month earlier and consider that sufficient notification. That could explain those responses that disagreed to a greater or lesser extent. Yet nearly as many students agreed to a greater or lesser extent. Perhaps such ambiguity revealed the limited value of this question construct.

The distribution of response for Statement 6 (Figure 7) offers a balance of agreement, disagreement, and undecided opinion about whether earlier knowledge of copyright would assist in the participation process. While it is hard to imagine a medical student seeking an intimate understanding of copyright in the midst of demanding clinical learning environments, the world of scientific publishing is increasingly diverse, with new options such as self-archiving or public access encouraged by the U.S. National Institutes of Health (Gesensway, 2000). Earlier knowledge of copyright and intellectual property in medical school is apparently not such a strange idea, at least to a significant minority of survey respondents.

5. CONCLUSION

The proportion of students intending to deposit their thesis (Figure 1) demonstrates a significant readiness to participate in an electronic thesis repository, but considerable

variation in response patterns do not suggest uniform student concern about the best way to make an informed participation choice. The statement response to a suggestion that earlier participation knowledge would have made the decision easier (Figure 6) produced the greatest variance. As the survey response was entirely voluntary, it was significant that nearly half of the graduating students chose to respond.

Student life is decidedly less chaotic for medical students in the final weeks after they receive their “match” for post-graduate medical training in mid-March, though at Yale the final submission of the print student thesis becomes a priority. With the existing steps in mandatory print thesis submission firmly fixed in the minds of students and the growth of digital-practice in their profession and digital publication submissions a matter of fact, opportunity for encouraging a greater amount of YMDTL participation is a realistic and timely goal at the Yale School of Medicine.

6. AUTHORS' CONTRIBUTIONS

CJG created and distributed the survey instrument, created data analysis, and formatted the final manuscript. JNF provided editorial support for the discussion and conclusion, as well as valuable feedback and support as a co-director of the Project.

7. ACKNOWLEDGEMENT

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8. REFERENCES

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