Switching to Large Envelopes

Encouraging Behavior Change in Mailed Submissions

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SUMMARY

In an effort to better understand why so many apprentices choose to send multiple lesson submissions in single envelopes, I took a look at some of the data we have generated from the intake logs during the first two weeks of Feb 2016.

1. Using the intake logs from the first part of Feb 2016, I copied all the line items into a spreadsheet. I then filtered out all of the final exams and sorted the list from most submission to lowest.

2. I then did an estimation on how much it costs us to process lessons in their current state.

3. I also did some calculations on how much it was costing to mail these lessons. I took into account:

    ● Number of lessons submitted
    ● The average page count associated with a lesson
    ● The physical weight of a piece of paper
    ● The estimated weight of an envelope (small and large)
    ● USPS shipping rates for First-Class mail (small and large)
    ● Overage charges for letters that weight > 1oz
    ● Whether lessons were being mailed with an envelope for each or packed in one envelope
    ● The max thickness for a large envelope to ship at standard rates is ¼"
    ● 250 sheets of 20lb paper is an inch. Divide that by 4 to get ¼" and it comes to 62.5 sheets

During the mail sort on Monday Feb 29th, we categorized lesson submissions into the following types:

● Single Envelope, Single Lesson
● Single Envelope, Multi-Lesson
● Multi-Envelope, Single Lesson
● Multi-Envelope, Multi-Lesson

Below are the findings from this analysis as well as some potential negative outcomes that occur from not discouraging apprentices from sending single lessons. Note that some factors are missing from these findings and may impact future steps going forward. They include:

● Time spent opening single lessons vs. multiple lessons
● The time spent preparing lessons for scanning is an estimate
● Cost of small envelopes vs. large envelopes
● Cost of printing on envelopes
● Kelly Printing labor associated with packaging courses with envelopes

It also should be noted that the sample date range is not necessarily an ideal sample size. The first 2 weeks of the month seem to have had higher than usual submission rates. It is recommended that the sample size be expanded to gather a truer sense of actual submission numbers.

FINDINGS:

Lesson Submission:

- Out of the 613 submissions, 545 were lessons.
- Of these lessons, 50.3% were submissions that contained more than 1 lesson
- The average number of lessons per submission was 2.57 lessons
- The average number of lessons per multiple lesson submissions only was 4 lessons
- The median was 2 lessons

Mail Processing:

Tim's sorting of 51 Apprentices submitting lessons on Feb 29th breaks down into:

- 21 Submitters (41.18%) had Single Envelope, Single Lesson submissions
- 10 Submitters (19.61%) had Single Envelope, Multi-Lesson submissions
- 18 Submitters (35.29%) had Multi-Envelope, Single Lesson submissions, with an average of 3 separate lessons submitted
- 2 Submitters (3.92%) had Multi-Envelope, Multi-Lesson submissions

The lessons took approximately 50 minutes to open, unfold, and organize (about 59 Seconds per submitter). If we assume a hourly rate of $18.00, it cost $15.00 to open just the lessons:

- Single Envelope, Single Lesson submissions: $6.18
- Single Envelope, Multi-Lesson: $2.94
- Multi-Envelope, Single Lesson: $5.29
- Multi-Envelope, Multi-Lesson: $0.59

The analysis did not take into account the quicker rate that lessons could be processed at if they were packaged the way WCC recommends. It is assumed that multiple lessons packaged in on flat envelope would take much less time than single lesson envelopes.

Lesson Scanning Preparation:

1. An estimate of 10 seconds to 'prep' a lesson for grading was chosen.
2. Assuming 545 lessons every two weeks, there is a total of 36 hours of prep work spent each year
3. Assuming a man hour is $18.00, this equates to $654.00 per year just in prep time

Postal Rates:

1. When packing the same number of multiple lessons into both small and large envelopes, the smaller will always be a cheaper solution. However, due to size constraints, an

apprentice might only be able to fit 3 lessons in a small envelope compared to up to 12 in a larger envelope and still meet the ¼" limit set by USPS. For example, say two apprentices are sending in 12 lessons from the same book and each lesson has 5 pages.

> Apprentice 1: 4 small envelopes w/ 3 lessons in each = $3.72 Total shipping
> Apprentice 2: 1 Large envelope w/ 12 lessons in each = $3.18 Total shipping

2. If an apprentice chooses to send in multiple lessons in multiple small envelopes, using the 5 page per lesson estimate, the break even point compared to sending one large envelope is 3 lesson submissions (Small envelopes are $1.47 and one large is $1.42). If we use the previous example of submitting 12 lessons we see results like this:

> Apprentice 1: 12 small envelopes w/ 1 lesson in each = $5.88 Total shipping
> Apprentice 2: 1 Large envelope w/ 12 lessons = $3.18 Total shipping

3. If we remove the single lesson submissions from the intake log count and extrapolate it to a full year we get 10,656 lessons submitted in groups with an average of 4 lessons per submission. If we then plug our 4 lessons back into our postal calculator the result is:

> Using 4 small envelopes: $1.96
> Using 1 large envelope: $1.64
> Savings: $.32 per every average multiple submission, $959.04 per year.

OTHER NEGATIVE IMPACTS OF SUPPLYING SMALL ENVELOPES:

There are a number of other negative impacts of supplying apprentices with small envelopes that affect apprentices as well as the WCC Staff.

1. **Many apprentices are confused by the multiple envelopes and are assuming that packaging one lesson per envelope is a requirement.** This is most apparent when we receive a priority mail envelope containing multiple lessons that have been folded and placed in the provided small envelops. However, the large number of multiple submissions that arrive individually in separate envelopes is quite high. Further analysis should be done to determine this exact number.

2. **Providing small envelopes encourages the folding of scantrons, lessons, and handwritten work.** Folding greatly increases the time spent opening and organizing mail. Folded work is also the main cause of scanning errors as tri-folded paper often catches on the previously scanned sheet and can lead to un-sequencing apprentice lessons.

3. **Multiple lessons mailed in separate envelopes will often arrive at WCC on different days.** Many times this results in one set of lessons going out to one grader and the lessons that arrived late going out to another. This leads to the apprentice calling WCC to track down their remaining

lessons that are still in the grading process. It can also have an impact on delinquent apprentices getting back to work if one lesson arrives late.

CONCLUSION:

Encouraging the submission of multiple lessons of three or more packaged in one large envelope has a financial benefit to both the JATC-669 and Apprentices. It also has the potential to reduce the number of hours spent processing hand graded work, opening up more time for content creation projects as we hopefully are transitioning to more online learning in the next year.

RECOMMENDATIONS:

While more data analysis needs to be performed, it is clear that getting Apprentices to submit multiple lessons at a time benefits all stakeholders. It can also open up new opportunities to inform the Apprentices on how to prepare and send their lessons so that they are processed in the more efficient way possible.

1. **Inquire with Kelley Press the feasibility and cost of sending 3 large envelopes with each course as opposed to a small envelope for each lesson.**

2. **On the back of these large envelopes, print a list of instructions outlining exactly how to prepare lessons including:**

    **HOW TO SAVE MONEY & HAVE
    YOUR LESSONS PROCESS FASTER:**

    1. Ship multiple lessons in this envelope
    2. Do not fold paperwork
    3. Do not staple paperwork
    4. Separate all worksheets
    5. Remove frayed edges
    6. Include Name and Student ID Number on all pages

    ORDER SUBMISSIONS THIS WAY:
    1. First Lesson
        a. Scantron
        b. Worksheets
        c. Handwritten Work (if any)
    2. Second Lesson
        a. Scantron
        b. Worksheets
        c. Handwritten Work (if any)

3. Repeat