Instructions for NCII - JFF's Guided Pathways Return-on-Investment Model

Introduction

These instructions are to guide you as you enter the necessary information into the NCII / JFF's Guided Pathways Return-on-Investment (ROI) Excel spreadsheet. Instructions follow below for each section. Keep in mind that many cells have formulas that calculate automatically. The model will work best if you only enter data into the cells discussed below in the instructions so the formulas all work. If you have any questions, please contact rob@ncii-improve.com. Thanks!

Instructions

- You can enter data into many of the cells in Sections 1 thru 3, which are outlined below in the description of each section under the heading "Data Entry Cells".

- Many cells are calculated automatically, and you will find a list of these in each section of the instructions below under the heading "Automatically Calculated Cells". We would suggest not adjusting these formulas or entering data in these cells, so that the model will work as designed!

- You will find some individual cells in Sections 1, 2, 5 and 6 that are shaded yellow that are placeholders; for most of these you will enter data for to customize as you use the model.

- All cell columns designated in the instructions refer to the individual table columns designated in the header in each section, not the overall Excel spreadsheet columns.

- All sections use an annual timeframe with one exception, which is described in Section 6; FTES generated by Program students are calculated for a 3-year period timeframe after entering the Program.

- The values in the cost sections where you are to enter data (sections 2 & 3) are zeroed out to begin except for row 6 of section 2, which has a placeholder figure of $600,000 to stop errors that would occur in the formulas below if everything was zeroed out. **If you have a number to enter in section 2, row 6 for "Other Faculty Staff Release Time / Stipends #2", replace the $600,000 with that number; if not, place a zero in this cell.**

- **Very important discussion (!):** When you are considering what to include as the "costs" of guided pathways work, it is important to note that this ROI model is designed to assess the underlined incremental costs of doing guided pathways work vs. the standard suite of services that the college offers. This "standard suite" will of course vary by college, and even further different people within a college might consider a

given cost – say marketing & communications as an example – as either "part of a standard suite of services" or "incremental". This particular consideration of whether to include a cost in the model as incremental in relation to this particular service or set of services is certainly more art than science; we would observe that you could also run the model in different scenarios with a given cost either included or not to see the potential effects on the bottom line and the breakeven improvement rate.

Section by Section Model Exploration

Section 1 – New FTEIC Students

This section allows you to customize the model to the size of your college's entering cohort of new FTEIC students. On the national AACC and various state guided pathways initiatives, CCRC, NCII, AACC and JFF have focused on FTEIC students, as it is the "cleanest" cohort and all of them are moving forward from the same starting line. Downstream unit-taking and cost structures will likely be different for dual enrollment and/or returning adult students. While we would suggest an initial focus on the FTEIC students, the model can be applied to all three segments either separately or together; note that this will change your request to institutional research for data on the average number of units attempted in the first three years in Section 6 below.

- Enter the number of new, first-time-ever-in-college students in your most recent Fall term or the future Fall term that you are modeling in cell B1. If you are interested, we would suggest running this model separately for dual enrollment students or returning adult students in your cohort, although you can include all three segments in one spreadsheet.

- Note: Cell B1 has a current value of 3,000 in it as a placeholder (highlighted in yellow); replace this placeholder value with entering FTEIC student cohort for the year you want to model outcomes.

- Data Entry Cell: B1

Section 2 - Staffing of Guided Pathways Related Efforts

This section accounts for the costs of staffing associated with guided pathways related efforts to improve the outcomes of your students.

- There are **three methods** for entering costs for each type of support – 1) hourly rate / annual hours (columns B, C & D); 2) percentage of FTE associated with the Program only (columns E, F, & G); or 3) a fixed annual support type for the Program (column H).

- If using **hourly rates**, enter the number of hourly employees supporting the Program in the category (column B), the hourly rate for the employees (column C), and the annual number of hours per employee (column D).

- For the **percentage of FTE** approach, enter the FTE associated for the support type for the Program in column E, the annual salary for the employee in column F, and the annual benefits cost in column G.

- If using an **annual line-item budget** for the support type, record it in column H.

- The cost is calculated automatically in column I, and is totaled for all the lines of the table.

- If it is necessary to add additional rows in this section, add them **above** row 6 so the formulas continue to work.

- Note: We include the listed categories of positions here as examples, not because you <u>need</u> to include costs for them, but rather because they are common cost categories that we have seen associated with the guided pathways reforms we have seen across the country. See the discussion of "incremental" vs "standard" in the introduction above for more on this…

- Note 2: This section contains a placeholder figure of $600,000 in cell H6 (highlighted in yellow) to stop errors that would occur in the formulas below if all the cost sections were zeroed out. <u>If you have a number to enter in section 2, row 7 for "Other Faculty Staff Release Time / Stipends #2", replace the $600,000 with that number; if not, place a zero in this cell.</u>

- <u>Data Entry Cells</u>: B1 to D6 (Hourly), E1 to G6 (FTE/Salary), H1 to H6 (stipend)

- <u>Automatically Calculated Cells</u>: I1 to I6, Total Guided Pathways Staffing Costs

Section 3 – Incremental Fixed Costs

This section accounts for incremental fixed costs associated with guided pathways reforms such as technology fees, technology services, travel, professional development, subscription fees, training, and evaluation costs.

- Simply enter the annual budget for any such items in column B.

- If it is necessary to add additional rows in this section, add them **<u>above</u>** row 9 so the formulas continue to work.

- <u>Data Entry Cells</u>: B1 to B9

- <u>Automatically Calculated Cells</u>: Total Other Incremental Fixed Costs

Section 4 – Incremental Cost Summary

This section is calculated automatically, and sums the incremental costs of the Program from Sections 2 & 3, and creates a **total annual program cost** and an **incremental cost per student** in the program by dividing by the number of students in the program from Section 1.

- <u>Data Entry Cells</u>: None

- <u>Automatically Calculated Cells</u>: B1 to B2, Total Program Costs, Incremental Costs Per Student in Program

Section 5 – Funding Assumptions per FTE & Unit

This section records the funding per FTE & Unit that is necessary to calculate the potential incremental revenue from Program students. To do this, we start with a basic assumption that 24 units equals roughly one FTE. We know this isn't 100% accurate because of the relationship between contact hours and units, but it works as an approximation and is likely conservative in its handling of the issue.

- Enter the tuition cost for 24 units in column B of row 1 of this section. This can be achieved by multiplying the per unit cost by 24 units or entering the "full-time" tuition for 12 units or above if that approach is applicable.

- If you are in a state in which the colleges don't keep tuition revenue (e.g CA, NC), enter $0 in column B, row 1.

- Enter the state apportionment funding per FTE (full-time equivalent student) in column B of row 2 of this section. Your business officer likely will have this number, or it may be available from state sources.

- If you are in a state with a block grant for apportionment (e.g. KS, KY), enter $0 in column B, row 2.

- <u>Note</u>: Cells B1 and B2 have placeholder values in them (highlighted in yellow); replace these placeholder values with your tuition cost for 24 units and apportionment per FTE funding values, or $0 in the cases indicated above.

- <u>Data Entry Cells</u>: B1 & B2

- <u>Automatically Calculated Cells</u>: Total Funding Per FTE and Funding per Unit

Section 6 – Incremental Units from Program Students

This section requires a bit of information from your institutional research office for row 2, which is necessary to establish a baseline comparison for your modeling of the effects of guided pathways-related reforms. It then calculates the number of incremental units that would be obtained from a new cohort of students entering after guided pathways reforms are in place. In doing so, the model can calculate the revenue effects of the incremental units in Section 7.

- Row 1 brings down the number of students in the Program from Section 1.

- **Enter in row 2** the average number of total units attempted student over a 3-year period generated by FTEIC students in the most recently available Fall term to allow for three years of data from each cohort. That is, if you are looking at this model in Fall 2017, you would go back to the cohort of entering students in Fall 2014, and track their units taken through Spring 2017 (inclusive of intersessions and summer terms).

- **Enter in row** 3 your <u>improvement goal</u> for the percentage increase in 3-year Average Total attempted units per student <u>that you hope to achieve</u> with your guided pathways reforms for students upon implementation. If you had three years of Program data after guided pathways reforms have been implemented, you could of course calculate the number directly from the database, but given that you likely are just starting out, this number will need to be estimated. <u>We know that this number is an estimate</u>; but it does allow you to test various goal targets to see the effect on the bottom line. For example, you could enter different numbers here until you find the "break-even" increase you would need for the guided pathways reforms you are modeling to "pay for themselves" given the cost & revenue parameters (see Section 7 below for how this works).

- Row 4 calculates the Total Incremental Units generated by post-GP reform students, given the modeled percentage increase, the number of students, and their average units attempted in the comparison group.

- Row 5 multiplies the funding per unit from Section 8 for a total <u>potential</u> revenue estimate from Program students.

- <u>Note</u>: Cells B2 & B3 have placeholder values in them (highlighted in yellow); replace these placeholder values with your most recent new student cohort's average total number of units / Student and the percentage increase value you wish to model.

- <u>Data Entry Cells</u>: B2 & B3

- Automatically Calculated Cells: B1, B4 & B5

Section 7 – Cost / Benefit of Program and ROI Estimate

And now, the magic happens – **this section is calculated automatically except for cell B3**, and provides the following information:

- In row 1, we bring down the annualized cost from section 4.

- In row 2, we bring down the potential revenue from section 6.

- Then, in row 3 of Section 8, we need to estimate the "Profit Margin" on the potential incremental revenue, which is necessary because the potential downstream revenue identified in the ROI model is not without incremental costs. The more successful students who persist more than those in the historical / traditional will not always fill empty seats in subsequent courses. That is, there will be incremental costs associated with these more successful students - usually to open up new sections to serve them. There are also some infrastructure costs associated with increased retention as well. Given all this, in discussions with those familiar with the economics of community colleges, we have estimated that the "profit margin" on the incremental revenue ranges between 40% and 70%. We need to discount the potential revenue as such, and have included a profit margin of 55% as a placeholder highlighted in yellow. If you desire to be more conservative (or aggressive) in your estimates, you can change the default profit margin from 55% and enter it in row 3, column B.

- Row 4 automatically calculates the "net" revenue after applying the profit margin rate.

- Row 5 then automatically calculates the net revenue minus the annualized cost of the program, and this is the estimate of the "net savings" or "net loss" that the service(s) generate for the college.

- Row 6 then automatically converts this net savings/loss figure into a classic return-on-investment (or ROI) %, by using the annualized cost of the program as the "investment" and the net savings/loss as the return.

- Data Entry Cells: None

- Automatically Calculated Cells: B1 to B6

ILLUSTRATION OF THE EFFECTS OF THE MODEL: To illustrate what the results may look like, if we use the base figures in the template - with the $600,000 placeholder for costs, 3,000 FTEIC students in modeled year, an average of 20 units attempted by new incoming students (a typical community college semester-based figure), apportionment funding of $2,000 / FTE and tuition costs of $2,760 / FTE, the breakeven ends up being about a 9.2% increase in total units attempted. That is, you would need to see a 9.2% increase in the total units attempted / student from new FTEIC students to cover the incremental costs of serving them under a guided pathways model. If you saw a 15% increase, the Program would have a ROI of 64% with baseline parameters, netting the college $381K in downstream revenue. The breakeven rate will absolutely shift significantly as you customize the parameters to your own college's incremental guided pathways costs and revenue assumptions, but this just demonstrates the fun you can have with the tool ☺…