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## Evaluation for Understanding Student Growth

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## CHAPTER 5

# *Evaluation for Understanding Student Growth*

**BY JACEN GREENE**

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***“In the same way that we work with students to align their personal purpose and values with their career or entrepreneurial goals, learning outcomes help courses and programs align with broader institutional values and goals.”***

**JACEN GREENE**

Director of Impact Entrepreneurs

Portland State University

It can be challenging for social innovation instructors to assess individual student progress on change-maker skills through graded assignments and discussions alone, especially in online courses. Individual feedback is seldom self-reflective or detailed enough to be useful (see next page). So, how can we evaluate overall course progress or an individual student's growth in, for example, emotional and social intelligence?

***“ Honestly, I wouldn’t change a thing. This is the most enjoyable course I’ve ever had.”***

— Anonymous student feedback.

***“ Literally the worst class I have ever taken across my entire educational journey.”***

— Anonymous student feedback.

Self-reported confidence surveys may not work in isolation, but when coupled with traditional assessments and other tools, they can contribute to an overall picture of whether or not a course or program is achieving its goals in helping students develop changemaker skills and attributes. They certainly provide more information than the usual course evaluation or student satisfaction survey.

In 2014, one year after launching a new certificate in Social Innovation and Social Entrepreneurship, Portland State University (PSU) developed an ad hoc survey to determine how confident students were in applying changemaking skills they had learned in the new program. After a careful evaluation, it became clear that the survey was not providing actionable information in a rigorous manner. The original survey had not drawn on research in the field, was not constructed using common best practices, and had little peer review or input before it was put into use. In fact, most of the questions were the result of a single brainstorming session during a meeting. With support from Ashoka U, PSU started over and designed a new tool from scratch.

The intention of the new tool was to address the shortcomings of the original survey and to ultimately understand better how students engage with, progress through, and benefit from the certificate courses. This effort resulted in an online survey to measure self-reported changes in student confidence regarding specific changemaker attributes and skills. The survey is required at the beginning and end of three online social innovation courses, which can be taken either as individual electives or as core courses in the undergraduate/graduate Certificate in Social Innovation and Social Entrepreneurship.

The survey is coupled with several other evaluation tools. In the middle of each term, students are asked to complete an anonymous survey that asks about their perceptions regarding course format, content, and inclusion/representation. At the end of each term, students complete traditional course evaluation forms that focus on instructor effectiveness. After completing the entire certificate, students are asked to participate in a semi-structured one-on-one interview to discuss their experience and solicit feedback on program improvement.

In the Changemaker Survey, each question is linked to one of the 14 changemaker attributes identified by Rivers, Armellini, and Nie (2015). This list was chosen after an extensive literature review and

interviews with social innovation educators teaching similar courses and programs. Each of the 14 attributes is also linked to specific learning outcomes in the courses which use the survey. Although not every attribute is taught in each course, all questions are used so that a comparison can be made between changes in taught attributes and untaught attributes.

Question wording was designed based on similar surveys at other colleges and universities, best practices for research surveys, and with input from PSU School of Business faculty who have expertise in survey wording development. Specific verbs were chosen based on their prevalence in similar surveys and in research articles on changemaker skills and attributes.

Survey responses are not graded based on student achievement, but can be used to provide supplemental information on student progress and key areas for improvement. This is meant to encourage self-reflection and solicit more accurate responses. Responses can also be used to ascertain teaching effectiveness linked to specific learning outcomes and changemaker skills/attributes, rather than the course as a whole. To encourage participation, surveys are a required component of students' participation grade in each course.

## THE TOOL AND METHODOLOGY

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The measurement tool is a modular, online survey offered at the beginning and end of social innovation, social entrepreneurship, or social impact courses. Students are required to enter their name, so that changes during the same course or over multiple courses in the same program can be measured. Each question is linked to a specific changemaker attribute and allows a response on a five-point Likert scale from "strongly agree" to "strongly disagree."

**FIGURE 5.1**

### Survey Wording and Linked Changemaker Attributes

Changemaker Attributes (Rivers, Armellini, and Nie, 2015)	Survey Questions
1. Self-Confidence	<i>N/A - derived from other answers.</i>
2. Perseverance	I am confident in my ability to adapt to changing circumstances.
3. Internal Locus of Control	I effectively set goals and track progress towards them without supervision.
4. Self-Awareness	I am willing to address my weaknesses and improve my strengths.

5. Action Orientation	I am comfortable taking action on my own initiative.
6. Innovation and Creativity	I am creative in coming up with new ideas.
7. Critical Thinking	a. I question my own assumptions and those of others. b. I find and evaluate information from a range of sources when working on a project.
8. Empathy	I seek to understand the perspectives of people different from me.
9. Reflective	I am open to receiving and acting on feedback from others.
10. Communication	I can effectively communicate using a variety of methods and tools.
11. Emotional and Social Intelligence	I usually manage my own emotions in constructive ways.
12. Problem Solving	When working to solve a problem, I carefully analyze it and critically evaluate different solutions.
13. Leader	I am confident in my ability to lead others.
14. Values-Driven	I am motivated by my personal values to help create a better world.

## IMPLEMENTATION CASE STUDY

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### Overview

The survey was initially delivered in the Winter Term 2018 course, *Money Matters for Social Innovation*. The course covers business models for social innovation, including customer discovery, the Business Model Canvas, legal entities, risks, market sizing, funding sources, and financial forecasts. *Money Matters* is delivered entirely online and offered to both undergraduate and graduate students from various disciplines, as well as to non-students. The survey was a required activity and delivered through the course's primary online learning platform. Students completed the survey in weeks two and nine of the 10-week course.

The survey was delivered for the second time in the Spring Term 2018 course, *Storytelling and Impact Measurement*. The course covers both qualitative and quantitative aspects of communicating a venture's purpose and impact, through individual and organizational pitches, as well as through social

and environmental impact measurement. *Storytelling* followed the same format as the Winter Term course, offered online to a similar mix of students, and included the required survey in weeks two and nine of the 10-week course. Some, but not all, of the students participating in *Storytelling* had earlier completed *Money Matters*.

## Findings

Survey results revealed patterns of student progress (or lack thereof) in specific changemaker attributes that weren't apparent from graded assignments or course discussions. This provided clear guidance for improvements in pedagogy and curriculum linked to attributes that were part of existing course learning outcomes, but that didn't show meaningful, positive change across student responses.

Only 11 of 32 students enrolled in *Money Matters* completed the survey twice, despite the fact that it was required as part of the participation grade. This indicated a need for individual reminders to students who failed to complete the survey twice, either directly or through a grading item that could be tracked separately from overall participation. The students who completed the survey both times also had high engagement in other aspects of the course and scored themselves highly in the surveys.

Most attributes taught in the course showed little change. There was a moderate improvement among students on the average "action orientation" attribute, and small improvements on the average "perseverance," "problem solving," and "leadership" attributes. "Critical thinking" showed a small average decline, particularly on the question asking about evaluating information from a range of sources, and "emotional and social intelligence" showed no average change, indicating areas that will require additional focus in future sections of *Money Matters*. "Perseverance," although not an explicit focus of the course, showed a small average improvement—perhaps a reflection of the workload, reported by students to be heavier than other School of Business courses.

In *Storytelling*, 20 out of 32 enrolled students completed the survey twice. The increased completion can be attributed in part to creating a separately graded participation requirement for the survey, and to sending reminders to both the entire course and individual students. Correlation between completion and high academic achievement was lower in *Storytelling* than in *Money Matters*.

Of the changemaker attributes taught in the course, "communication" showed a moderate average improvement. "Self-awareness" showed a small decline, and "leadership" and "reflection" both remained nearly unchanged, indicating a need for increased focus on both attributes in future sections. "Critical thinking" showed a small average improvement. Among the attributes not taught in the course, "innovation and creativity" showed a moderate average improvement, and "problem-solving" and "values-driven" showed small average improvements.

## Lessons Learned

Ensuring high levels of student participation and finding a survey tool that enabled easy data collection and analysis were two major challenges. The tool initially selected for survey distribution and analysis

was integrated with the course learning platform, Desire2Learn, but was insufficient for calculating the value of responses and the changes in those values over time. Those values were collected and calculated manually for the surveys assessed in *Money Matters* and *Storytelling*. PSU migrated the survey to Google Forms for use in future courses, which improved reporting capability and created an easily replicable template which other campuses can tailor for their own courses or activities.

While the survey was designated in the syllabus as a required component of students' participation grade, *Money Matters* did not associate individual points with the activity nor did students receive a reminder to complete the survey. In that course, only 34% students completed the survey for a second time, so data was limited for assessment. In *Storytelling*, tracking individual participation in the survey, assigning points to student participation, and issuing individualized and general reminders to participate did improve participation, particularly for the second time the survey was assigned in that course, resulting in 63% of students participating fully in the survey.

While the data set was limited in both courses due to low participation in the survey, it does suggest that the courses were not effectively improving students' confidence in "critical thinking" or "emotional and social intelligence." Additionally, only small average improvements were reported on "perseverance," "problem solving," and "leadership." The survey results indicated those areas as priorities for improvement.

## Plans for Use

Survey findings were used to adjust pedagogy and curriculum in both courses, with new discussion questions and readings, along with changes to assignments and assignment descriptions, to better foster student progress in skills that weren't being taught as effectively as assumed. In *Storytelling*, scores on "self-awareness," "leadership," and "reflection" all showed an improvement the next time the course was taught, with the biggest improvements in "self-awareness" and "leadership." This may simply be a result of a different student group, but other attributes showed similar gains as before, and the student response rate remained high.

The survey may be useful from a research perspective, since it enables longitudinal evaluation of individual student progress and could be linked to future career or entrepreneurship outcomes. For example, do students who show short-term growth in key changemaker attributes demonstrate better entrepreneurial outcomes than those who show consistent, but high, scores? We hope to work more closely with faculty conducting research in these areas to determine if the survey is applicable for research beyond course and program improvement.

## SUGGESTIONS FOR ADAPTATION AND USE

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The survey was designed to be easily adapted to social innovation programs across PSU or at other institutions, either offered in its entirety or used in a modular fashion. The Google Forms tool is free to use and available by request of the authors: please email [jacen@pdx.edu](mailto:jacen@pdx.edu) or [achroman@pdx.edu](mailto:achroman@pdx.edu).

Linking questions to specific changemaker attributes allows administrators to reorganize or limit the questions based on specific learning outcomes or skills/attributes taught. Maintaining the current question wording also begins to enable comparison between different programs.

If the survey is adopted across multiple institutions, it could provide interesting data on the effectiveness of various approaches to teaching specific changemaker attributes. For example, do students show greater progress on self-reported “empathy” in field studies vs. online courses? What about in courses that provide service-learning projects vs. community-based learning? Questions like these will be more easily answerable.

On a smaller scale, longitudinal use of the survey will enable useful feedback on the result of changes to pedagogy or curriculum in specific courses. When a course is reviewed and updated to meet best practices of inclusive or universal design, do students show more progress against all changemaker attributes, or only some? Is that progress more visible among specific student demographics? Focusing on changemaker attributes enables more focused analysis than a simple survey of student satisfaction, instructor evaluations, or graded assessments.

We at PSU hope that educators at other institutions will adopt, adapt, and improve upon the survey, sharing their modifications and recommendations with each other. The goal is to contribute in a small way to ongoing progress in social innovation education, with the goal of enabling more students to recognize and achieve their potential as changemakers.



## RECOMMENDED RESOURCES

A resource that we would recommend is:

- *Embedding Social Innovation and Social Impact Across the Disciplines: Identifying “Changemaker” Attributes* by Bethany Alden Rivers, Alejandro Armellini, and Ming Nie (2015)