

Transforming Learning through Agility

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Abstract: Today, Agile has expanded its realm way beyond the software industry. Companies have successfully adopted Agile framework in core business units, from marketing to human resources to finance. This has helped them to deal with uncertainty in a better way and inspect and adapt effectively. In this paper, we will be exploring, one such area which has seen exponential growth in the past few years, i.e. Learning and Development. We will inspect how agile principles and values can be applied to competency-based certification learning programs to achieve the desired learning outcomes.

Competency-based certification programs require a student to pass an examination conducted by the accrediting body after the training program. An evaluation of training effectiveness of these programs revealed that out of the total students who attended the training program, only 15- 20% of students appeared for the final certification exam. This paper investigates some of the reasons and obstacles which deterred students from achieving their final learning goals.

Keywords – Agile, Competency based certification, professional certifications, learning objectives, training evaluation

I. INTRODUCTION

Agile was developed primarily to shorten the time to market of software projects and enable them to better respond to change in an uncertain and turbulent environment. The Agile manifesto explicitly laid out 4 key values that are core to the Agile mindset and can be applied to any sector. [1]

The key values of agile are

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|---------------------------------|------|-----------------------------|
| A. Individuals and interactions | over | Processes and tools |
| B. Working software | over | Comprehensive documentation |
| C. Customer collaboration | over | Contract negotiation |
| D. Responding to change | over | Following a plan |

Although it was initially developed for software projects, it has very quickly expanded its realms way beyond the software industry. The beauty of Agile lies in the fact that it is not a methodology, but a culture, a mindset which can be applied to any type of work. According to a Harvard Business Review published in 2016:

“National Public Radio employs agile methods to create new programming. John Deere uses them to develop new machines, and Saab to produce new fighter jets. Intronis, a leader in cloud backup services, uses them in marketing. C.H. Robinson, a global third-party logistics provider, applies them in human resources.”[2]

This paper is an attempt to apply the Agile values to Learning and Development sector. Learning and development has played a pivotal role in improving the performance and productivity of employees, retention rates and brand of organizations. Learning has been in the forefront of talent acquisition efforts as employees nowadays want personal and professional development opportunities. Companies with strong learning culture help employees develop in their current and future roles much faster and are able to retain talent effectively. Creating a learning and development program that's aligned with business goals and improves organizational performance can be quite a bit of challenge for learning professionals. In addition to this, you also need reliable metrics and methods to measure the effectiveness and the ROI of employee training initiatives.

Kirkpatrick Evaluation Model, developed by Professor Donald Kirkpatrick is one of the most successful models in measuring training effectiveness. The four levels of Kirkpatrick's evaluation model essentially measure:

- Reaction of student - what they thought and felt about the training
- Learning - the resulting increase in knowledge or capability
- Behaviour - extent of behaviour and capability improvement and implementation/application
- Results - the effects on the business or environment resulting from the trainee's performance. [3]

Most organisations were successful in implementing knowledge-based learning programs (traditional classroom style) like Technical/Functional Skills, Soft Skills, Quality, Product and Services, Safety, Leadership trainings and measuring effectiveness of the same. However, very few could develop competency-based training models and successfully measure its effectiveness. Competency based learning focuses on building skills or competencies in an individual. Unlike traditional training methods, which overload a learner with information, competency-based training breaks down a learning program into smaller units and learners move from one level to another based on their demonstration of knowledge.

Some competency-based certification programs also require a student to pass an examination conducted by the accrediting body to showcase a certain level of expertise in the respective field. The paper presents a conceptual proposition of how agile principles can be applied to improve the efficacy of competency-based certification programs.

II. THE PROBLEM AREA

As the popularity of professional certifications grew in the market, organizations started investing heavily in these, with an aim to help their employees attain these certifications. Organisations partnered with training organizations who are endorsed education partners with the respective accrediting body in order to facilitate the same.

An evaluation of training effectiveness of these programs revealed that out of the total students who attended the training, only 15-20% of students appeared for the final certification exam. This defeated the main goal or objective of the training.

To understand the problem area better, we collected data from 30 working professionals who had completed these training programs one year ago with an aim to clear the final certification exam, however they never registered for examination with the accrediting body after completion of training.

Students cited several reasons as failure in doing so as indicated in below table.

Table 1: Failure Reasons

Reason	Description
Time management	Not able to efficiently distribute time between office work and exam preparation
Too Busy	Projects running into hectic schedules left very little or no time for exam preparation
Fear and Anxiety for exams	The difficulty level of these examinations created fear and anxiety amongst the students. Many feared if they failed, they will end up losing the exam fees which was a significant investment.
Not able to focus	Unable to focus on both work and exam preparation at the same time. Always gave first priority to work.
Not motivated enough	Lacked motivation to prepare for exam
Lack of guidance	There was no mentor post training who would guide them through their learning journey

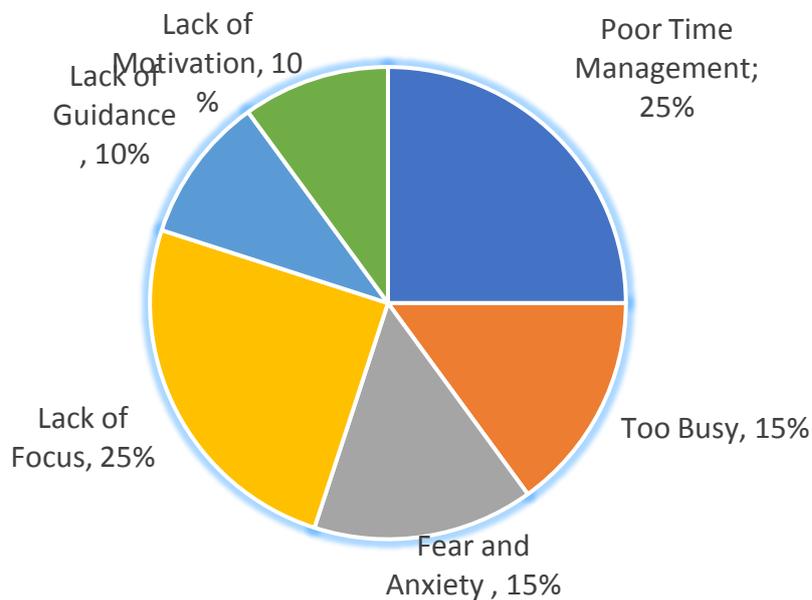


Figure 1: Reasons of failure

III. HOW AGILE CAN HELP?

We applied agile principles to address each of the nuances stated above and help students achieve the desirable results.

A. Step 1: Planning

a) Team formation

A strong team forms the foundation or pillar of success in any project. Study groups can be formed after the training program. These study groups (hereafter referred to as 'Study Team') will remain active till every member of the team completes their certification. While forming study team, emphasis has to be laid on the fact that team members develop enough focus, a sense of belonging, motivation and are driven towards a common goal. Study team will include only members who have paid the examination fees to the respective certifying body. This is another element which adds focus, motivation in the minds of

students. Team should work out a common exam date on which every member of the team will give the exam. This exam date can be worked out based on the study plan created by the mentor or trainer.

Many training organizations leave it open to students to decide as to when they would like to register, pay and take exams. 95% students defer this indefinitely, finally losing focus and determination to give the exam.

Some of the characteristics of the study team:

- 1) Team should craft a common learning goal every week.
- 2) Members of the team should hold one another accountable for completion of learning goals
- 3) Members of the team should register and pay for the exam.
- 4) Team should work out a common exam date on which every member of the team will give the exam.
- 5) Team should have group leader who would raise obstacles or hindrances faced by the team with the mentor
- 6) Team should define a working agreement which would further establish their commitment and determination towards the goal.
- 7) Team should regularly meet daily or once a week to review their progress and make changes to the original plan, if required.
- 8) Mentor/trainer will guide the team at every stage and helping them achieve the final goal.
- 9) The Mentor will arrange for resources like Books, Reference Materials,

Online Mock tests, Setting up active task board

b) Working Agreement

The study team can draft working agreement which consists of guidelines defining how they want to work together, and what they want in the working environment to feel safe and free to learn.

This further instills commitment, dedication and enables the team to self-organize and take decisions whenever required. This working agreement can be updated based on inputs from team members in retrospective meetings.

Working Agreements

Goal: To achieve final certification by 10, Oct 2020

- **Commitment** – We all commit 2 hours of daily effort towards preparing for our final exam.
- **Dedication** – We will attend all meetings to check if we are making continuous progress or it will be difficult to achieve the goal. We will evaluate our progress on a regular basis to gauge our preparation level.
- **Be transparent** - No hidden agendas. We will give feedback, and receive feedback on some topic, and we should act on it for better improvement. We will update our tasks on a daily basis in the trello board so that everyone is aware of the progress.
- **Be Honest** – We will be honest to inform the team if we are unable to make progress and if there are bottlenecks. We will be honest in recording our scores during mock exams.
- **Team Spirit** – We all should work as ONE.
- **Courage** – We need to show courage to speak up and seek help and guidance from mentor wherever required.
- **Show respect** – We will respect everyone's opinion and make improvements based on suggestions as we move ahead.
- **Daily Meeting** – We will meet daily for **15 mins** to discuss our progress.
Frequency: Daily – 8:00 PM to 8:15 PM

Figure 2: Working Agreement

C) Definition of Done

The team can create a Definition of Done which will give all team members clarity on when an item on the task board can be marked as “Done”.

Definition of Done

A chapter will be considered complete and marked “Done” on task board only when the following conditions have been satisfied:

- The participant has read and memorized all the modules included in the chapter
- Cleared doubts with peer or Mentor if any
- Attempted the mock test for the respective chapter and secured at least 80% in the mock test.

Figure 3: Definition of Done

B. Step 2: Backlog creation

Mentor along with the group leader can prepare a study plan which serves as a backlog for the team to deliver its minimum viable output. The backlog consists of all chapters included in the exam curriculum. Every chapter in the exam curriculum can be looked at as an Epic which can be further broken down into submodules for better clarity and estimation. This will enable team to deliver several sub modules in a shorter timescale. A sample study plan is shown below:

Table 2: Sample Study Plan

Start Date	End Date	Topics
22-09-2020	22-09-2020	Introduction
		Business Analysis Key Concepts
23-09-2020	24-09-2020	BA Core Concept Model & Key Terms
25-09-2020	25-09-2020	Requirement Classification Schema & Stakeholders
26-09-2020	26-09-2020	Requirements & Designs
27-09-2020	27-09-2020	Mock test for Chapter 1,2
		Business Analysis Planning and Monitoring
28-09-2020	29-09-2020	Plan Business Analysis Approach
30-09-2020	01-10-2020	Plan Stakeholder Engagement
02-10-2020	03-10-2020	Plan Business Analysis Governance
04-10-2020	04-10-2020	Plan Business Analysis Information Mgmt
05-10-2020	05-10-2020	Identify Business Analysis Performance Imp
06-10-2020	06-10-2020	Mock test for Chapter 1,2,3
		Elicitation and Collaboration
07-10-2020	07-10-2020	Prepare for Elicitation
08-10-2020	08-10-2020	Conduct Elicitation
09-10-2020	09-10-2020	Confirm Elicitation Results
10-10-2020	10-10-2020	Communicate Business Analysis Info
11-10-2020	11-10-2020	Manage Stakeholder Collaboration
12-10-2020	12-10-2020	Mock test for Chapter 1,2,3,4

C. Step 3: Backlog Refinement

Backlog Refinement can happen parallelly as the mentor is teaching the respective chapter in the class. The Mentor can explain the chapter/backlog items to all participants, students can ask questions to clarify their doubts and also discuss the approach to be followed to complete the backlog items. Weekly learning goals should be created by team which can include completion of a chapter/backlog item. A prioritization technique can be devised by the group. Prioritization can be done by group leaders based on the weightage of the chapter in the exam. e chapters with higher weightage will be completed first and chapters with lower weightage will be completed last. This means chapters/backlog items which will give the maximum value will be completed first.

D. Step 4: Review and Retrospective

The team can meet on a weekly basis post training for review meeting. These reviews will consist of online mock tests conducted by mentor every week to check the preparedness of the team. This will ensure that the team is making continuous progress and achieving their learning goals.

Retrospective discussions can be held in the group to ensure continuous improvement and highlight obstacles which are preventing them from achieving their final goal.

Example: If a student has scored less in a mock test, he can discuss with the group to understand corrective actions to be taken.

The team can make amendments to working agreement based on these discussions.

IV. THE EXPERIMENT

Based on the model proposed above, an experiment was conducted with 10 students who were aspiring to give their ECBA (Entry Level Certification in Business Analysis) examination. A study team was formed and group leader was identified. Backlog was created based on exam curriculum. The team started meeting regularly in daily scrums and reporting their progress. However, when the team self-organized, they decided to take some deviations from the model proposed.

- A. Team collectively decided to defer payment of exam fees till the last week of study
- B. In due course of time, priorities changed and many team members started skipping review meetings to track progress
- C. Team did not hold each other accountable for the progress.

V. RESULTS

The Study team appeared very focused and determined for the first 2 weeks, but slowly students started exiting the group citing reasons of work pressure, health or college exams. At the end of first month, there were just 3 students in the group. After 1.5 months, there was just one student who was determined to give his examination and stuck to the schedule.

Some of the mistakes made by the team:

- A. Although team members were asked to pay the exam fees and schedule exam on the target date during the team formation stage itself. They kept procrastinating the same. This showed lack of commitment.
- B. They were also not able to create clearly defined subgoals with deadlines attached to it, this severely impacted the team.
- C. The study team rarely sought guidance from the mentor. Obstacles were not reported and team did not focus in continuous improvement. It was also found that more involvement from mentor was required in order to facilitate this.
- D. The study team did not hold each other accountable for not achieving their goals.
- E. Some of the team members who left the team had shown significant progress and secured top scores during the initial review (mock tests) sessions conducted in first 2 weeks. But as humans, it is very easy fall back into old habits, procrastinate, or lose motivation. They did not attend review sessions later.

On the other hand, one student who went ahead for certification was found to have exemplary levels of self-motivation. He had a personal drive and enormous commitment towards his goal.

CONCLUSION

From the experiment, it was clear that the study team failed miserably in goal setting which is necessary to build focus and motivation within the team. The final goal had to be broken down into realistic sub goals each of which have a deadline attached to it. If you set realistic deadlines then you can avoid distraction and keep yourself motivated.

According to research done by University of Scranton (Statistics Brain Research Institute), a staggering 92% people who set goals never actually achieve it. [4] Research by Edwin Locke and Gary Latham found that when people set specific and challenging goals, it led to higher performance 90 percent of the time. [4] Goals affect performance by directing attention, mobilizing effort and increasing persistence. Marcel Schwantes in his article stresses on using a feedback cycle to track progress. He says “your chances of hitting a specific goal increase greatly if you're getting frequent feedback that will keep you on track and help you to adjust accordingly.”[4]

This indicates that there is a strong connection between commitment, motivation, focus, goals and achievement. If you lack commitment to a goal, you lack motivation to reach them. Goals can serve as a central core which can help you focus and manage your time and resources to achieve it.



Figure 4: Goals

Based on the findings in our experiment, the proposed model was amended as follows:

Table 3: Amended Model

Phase	Changes Adopted	Issue Addressed
Team formation	Study Team should be formed during the training. Mentor will work closely with each team member to define clear and SMART goals every week with timelines based on their individual work schedule. Based on these timelines, a final target date for every member will be arrived upon. Members have to mandatorily pay and schedule exam. Team bonding with activities No Working Agreement or DOD	This will bring in commitment, focus and motivation in team. Creating smaller achievable goals will also help in better time management.
Reviews& Feedback	Daily goal sheet tracker Results published in Dashboard Incentives Reviews held using collaboration tool	Fear and Anxiety among students will decrease and they will develop confidence as soon as they see themselves making continuous progress
Execution	Mentor will be involved with every member of the team, closely tracking their progress and holding them accountable wherever they fail to achieve targets.	This will bring in accountability towards task completion and also instil confidence in students.
Retrospective	Mentor will identify corrective measures for other team members so that they can make changes, inspect, adapt accordingly.	Frequent feedback will keep team on track and adjust accordingly

VI. FUTURE WORK

This paper is an initial version of an ongoing study being conducted on competency-based certification programs. At the time of publishing, second phase of experiments are being conducted with the amended model proposed in this paper. Results will be published in the next conference.

Feedback from practitioners, experts from agile and training industry to improve this model are most welcome.

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