Reflection within Entrepreneurship Education
– Using Learning Logs

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Keywords: entrepreneurship education, learning logs, learning journals, learning seminars, reflection
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ABSTRACT

In this paper we discuss the method of using learning logs in entrepreneurship educations. The discussion is based on our experience from two classes where the method was developed subsequently. The concept of “learning seminars” is introduced as a complement to the learning logs. In our experience, learning logs and learning seminars could be a good way of making students reflect about what they are doing, and to make them relate their actions to theoretical knowledge. The method could be especially beneficial for entrepreneurship students, since they are often very action-oriented, and not very theoretically driven. The main conclusion is, however, that structure and clear guidelines are necessary. The paper ends with some advice on how to enhance students' reflection skills and propositions on how to make learning logs and learning seminars appear as meaningful activities for the students.

INTRODUCTION

Entrepreneurship is often recommended to be taught through action. Gorman, Hanlon and King (1997) have for example through a ten year literature review found that several articles suggested teaching strategies for entrepreneurship to include an element of concrete experience derived from active participation through projects and the like, and content directed to stage of venture development and emphasising functional integration. An action oriented curricula appears to enhance the four cornerstones of entrepreneurship that an entrepreneur needs to master in order to become successful: an ability to impact one’s personal environment, a high degree of self-confidence, an ability to create support networks, and an ability to create a linkage from vision to action (Johannisson 1991). Although they will come across many difficulties in this process, it is their ability to solve the problems they encounter that enhances their self-confidence, which in turn may enhance their entrepreneurial intention (Liñán 2004). In Johannissons (1991) terminology, we could categorise the learning outcome from action as “know-who” (to use the network), “know-when” (to find the right moment), “know-how” (how to do things), and “know-why” (to gain self-confidence and motivation). Problem solving and learning through experimentation together with other students (i.e. in teams) therefore ought to promote entrepreneurship (Johannisson & Madsén 1997). However, theoretical knowledge is needed to complement the action oriented knowledge. The students need to “know-what” (Johannisson 1991), i.e. know what to do, before they can engage in action. Letting students pass through an education based on action alone may result in that they are very good at handling the kind of problems that they encountered during that process, but are not at all prepared for other situations that may need other solutions. As Fiet (2000a, 2000b) argues, theoretical knowledge increases the possibility for the students to make proper decisions when they encounter different situations. The students should be provided with knowledge for action. But how can we bridge the gap between theoretical knowledge and action?

One way of bringing the action and the theoretical knowledge together, and to deepen the knowledge from both, is to make the students reflect on their actions and on their theoretical knowledge. Reflection about both theories and activities deepens the understanding of different situations as well as of one’s own way of handling them, and helps to integrate knowledge structures, which increases learning
performance (McCrindle et al 1995). In addition, reflection increases the “orientation knowledge” of the students, which according to Molander (1996, in Landström 2000) is especially important for the entrepreneur. “Orientation knowledge” helps the individual to strengthen his/her identity and to gain an overview over situations. According to Molander (1996, in Landström 2000), this kind of knowledge is created when the individual pendulates between the antipoles of the following pairs of concepts: parts and totality, closeness and distance, trust in criticism and reflective action. This means that the students ought to be better entrepreneurs if they reflect upon their part of action in relation to the totality of possible actions, if they get close to their own activities when engaged in them, but distance themselves through reflection, and if they trust the criticism they get from supervisors and team members, and reflect upon it when acting.

The apparent importance of reflection is why so called “learning logs” (e.g. Barclay 1996) are included in the curricula of the entrepreneurship educations at Lund university in Sweden. The students are required to write (individually) a “diary” on what, when, and why they have learned during the past week, and to reflect upon that. Everything that they had learned that could be related to the course should be included in the learning log. At the end of every three-week period, we gather the students for a “learning seminar” where the learning logs are discussed.

The purpose of this paper is to discuss the method of using learning logs in entrepreneurship educations, based on our experience from the learning seminars and the students’ logs. The ambition is also to give some concrete advice regarding how to enhance students’ reflection skills and propositions on how to make learning logs and learning seminars meaningful activities for the students.

LEARNING LOGS

Learning logs are described in different ways in the literature. One way to describe a learning log is as: “a means of tracking your development with emphasis on unstructured informal activities” (Greene et al 1991). It has also been described as a kind of diary used for recording and enhancing experiential learning (Barclay 1996b), or as a vehicle for reflection (Moon 1999). There does not seem to be a coherent definition of the concept, and we can find several different uses of learning logs, which increases the flexibility of the concept as such.

Learning logs have been used in higher education (e.g. Barclay 1996b; MacFarlane 2001) as well as in education for adults to improve their professional performance (e.g. Langer 2002; Loo 2002). Within higher education they have been used in a wide range of different scientific areas, like mathematics (McIntosh et al 2001), engineering (Langer 2002), medicine (Niemi 1997), biology (McCrindle et al 1995), and ethics (MacFarlane 2001). In fact, Moon (1999) reports use of learning journals in over 30 disciplines in formal education, although in wide variation of both use and structure. However, she found no report of the use of learning logs in entrepreneurship educations.

There are both explicit and implicit purposes of a learning log. The explicit purpose is the reason for writing the log, while the implicit is what you gain in the process of realising the explicit purpose. For instance, the explicit purpose may be to record

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1 Learning logs are in the literature interchangeably referred to as learning journals.
experience, but implicitly you also improve writing. Moon (1999, p. 40 ff) finds several purposes of learning logs:

- to record experience,
- to facilitate learning from experience,
- to support understanding and the representation of the understanding,
- to develop critical thinking or the development of a questioning attitude,
- to encourage metacognition,
- to increase active involvement in and ownership of learning,
- to increase ability in reflection and thinking,
- to enhance problem-solving skills,
- as a means of assessing formal education,
- to enhance reflective practice,
- for reasons of personal development and self-empowerment,
- for therapeutic purposes or as a means of supporting behaviour change,
- to enhance creativity,
- to improve writing,
- as a means of self-expression
- to foster communication and to foster reflective and creative interaction in a group,
- to support planning and progress in research or a project,
- as a means of communication between a learner and another

Some of these purposes seem overlapping, and some may be more relevant than others to an entrepreneurship education when the goal is to bridge the gap between theory and practice. Among the explicit purposes of introducing learning logs in an entrepreneurship education we find the facilitation of learning from experience, but entrepreneurship students should also enhance problem-solving skills and enhance reflective practice. In writing a learning log, they implicitly ought to bring with them an increased ability in reflection and thinking, and a record of their personal development and self-empowerment as a bonus.

The purpose of the log may decide what kind of log to introduce to the students. Four kinds of learning logs can be found in the literature: the unstructured log, where students are allowed to create their own format and content, the structured log, where the instructor specifies the format and the content, and the dialogue log, where student and instructor use the log as a means for communication, exchanging and developing ideas (Moon 1999, Langer 2002). An additional example of work that has been called a learning journal is the writing of an autobiography as a means of exploring students' pre-course conceptions (Moon 1999).

Although it may depend on the purpose of the learning log, based on their experience several authors recommend a structured learning log. Barclay (1996b) for instance found that the flexibility of the learning log created uncertainty and anxiety amongst the students, while more specific guidelines about how to write the logs resulted in more positive feelings about the benefits of the learning log. In accordance, both Langer (2002) and MacFarlane (2001) found that guidance and formal instruction of a teacher were beneficial for the students in the development of self-reflective critical thinking. Furthermore, Langer (2002) suggested that students may find it difficult to understand the meaning of reflection and how it could be applied to practice, which underlines further the importance of proper guidance.

There is an ongoing debate on whether learning logs should be assessed or not. On the one hand it is argued that the log is a personal and flexible tool, and therefore not suitable for assessment. On the other hand assessments may be necessary in order
to ensure students giving it due attention (Barclay, 1996b). According to MacFarlane (2001) confidentiality is also an issue for some students, who relate material of a personal nature. The confidentiality issue strengthens the argument that learning logs should not be assessed, but on the other hand, it may depend on the purpose and the structure of the learning log.

The benefits of keeping a log are several. Barclay (1996b) for instance reports improved self-awareness and professional development as outcomes of the learning log, and MacFarlane (2001) found that the learning logs had enabled the students to identify how their thinking developed and became more sophisticated. He also found that they benefited from reflecting on the forces that shaped their decisions and drew lessons for future action. Interestingly though, it appears that the benefits of keeping a log sometimes becomes more apparent a year or so after that the log was used (Barclay 1996b).

In conclusion, then, the learning log seems to be a suitable vehicle to make students reflect on their learning and decision making, although with some pitfalls that has to be avoided.

OUR EXPERIENCES FROM USING LEARNING LOGS

When designing one of the courses in Entrepreneurship at Lund University, we decided to include learning logs in the curricula. The course in question runs from September to January and includes the practical planning of an innovative project. The students are divided into six interdisciplinary groups with approximately six students in each. Parallel to the project work the students follow a series of lectures to broaden their knowledge base. When including learning logs, the ambition was to further increase and deepen the knowledge, and to make the students reflect about the theories and their relation to the activities in the projects. The course has now been given two times, and the learning logs have been used in two different ways, which will be described and evaluated below.

First year experiences
The first year, we gave the students very little guidance on how to write the learning log. The students were merely required to write (individually) a “diary” on what, when, and why they had learned and to reflect upon that. Everything that they had learned that could be related to the course should be included in the learning log. The students were told to write at least once a week. At the end of every three-week period, we gathered the students for a “learning seminar”, where they should also submit their learning log for the past period to the teacher. At the learning seminar, we practiced what McKinsey (2002) refers to as the “jigsaw method”, i.e. each member of a group met in another group with one member from each of the other groups. The task for the new groups was to discuss their learning logs for the past period – and this was all the guidance they got. Here, the students had the opportunity to learn not only from their own projects, but from all the other groups’ projects as well. During the semester, three learning seminars were held. At the end of the course, the students were required to write a paper where they should analyse their three submitted learning logs with respect to how their learning had developed during the semester. These papers were part of the examination and thus graded individually.

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For a description of the entrepreneurship courses at Lund University, see Löwegren 2005.
The absence of guidelines resulted in that the students produced three types of learning logs; the first type – “the lecture notes” - summarised what had been said during lectures, the second type – “the diary” - only discussed what had happened in the project, relations in the project group and feelings in the learning situation, and the third type – “the learning log” - was a combination of both, complemented with reflections. When we noticed this after the first learning seminar, we told the students to try to cover both theories, practice and reflections. At the next submission of learning logs, the learning log-format had increased, but the other two categories could still be found.

During this process we encountered numerous questions and frustration among the students. Although we explained the purpose of the assignment several times, some of the students failed to understand the point of writing learning logs. Their logs often consisted of a single sheet of paper with some diary notes on, or reflections on the course as a whole. The majority of the students, however, thought it useful but time consuming, and therefore resisted the idea. Their logs were most often written with focus on the project process and what had happened – the diary format, but with reflections of the process. A couple of students appreciated the learning logs, though, and their logs were also those that combined theory and practice the most.

When we scheduled the learning seminars we allocated 20 minutes to each member of the group to present and discuss his/her learning log. The first learning seminar resulted in much talk about the projects, the project ideas, their group members, and so forth. The students gained insight in each others’ projects, but not much more. That is, the discussions did not refer to any of the theories, nor did they reflect much on how and why they acted in a certain way in the projects. At the next learning seminar, the discussions tended to focus the relations among the group members in the project groups. This time, the function of the seminar became a forum for letting out anger and discontent with the other members of the project group, and to get suggestions from the other on how to tackle relational problems. At the third seminar, the groups were stabilised and focus were again on the projects, although at this time in the end of the semester, the students knew each other better, and matters not related to their studies entered into the discussions too, as well as the content and structure of the course. But still, they did not to any great extent reflect on how and why they acted in a certain way in the projects. However, according to the course evaluation most of the students thought the seminars as a useful forum to get to know the other group members and what their projects were about, and also to get ideas for their own projects.

The students’ last assignment in the course was to analyse their three learning logs with regards to their learning. The paper that they submitted was assessed with focus on the quality of their analysis. Judging from this last assignment and also from the written course evaluation, most of the students found this assignment valuable, and some finally could acknowledge the learning logs as a useful tool for reflection. The papers showed the students’ ability to reflect, and most students noticed a progression in their learning when going back to the previously written logs (as did we). This progression, and the increased ability to reflect that was found in most students, made us continue with the learning logs next year as well – although with some alterations.

Second year experiences
The first year experiences gave rise to discussions in the teacher team about how to make the students realise the importance of the learning log, and how to make them write in a reflective way. We discussed learning log structure, guidelines, learning
seminar guidelines, and assessment. In order to avoid the initial frustration among the students, we decided to give the students more guidelines in their learning log writing, and also to help them with the structure of the log. They were now told to address the most important learnings from the project process, the group process, and the learning process, and to complement this with personal reflections. Under these headlines they were told to write like in a diary. We assumed that clearer guidelines also would make the students more interested in writing, since they now would be more able to understand the point of the learning logs. Furthermore, we decided to reduce the time for each participant in the learning seminars to 15 minutes in order to make them focus on the topic at hand, and not discuss irrelevant matters. We also structured the seminars so that the students got three questions to discuss in their new groups:

1. Tell the others how the project is progressing, how you are working, and what problems or tasks you are dealing with at the moment, and how you are handling them.
2. Discuss why you chose to solve the problem/the task in this way, how you could have made it differently to get a better result, what you have learned from this, and what you bring with you to your next project in order to handle that one more efficiently.
3. Each member of the group should take down at least three learnings from the seminar that you consider valuable for yourself and your (ordinary) group.

The last alteration was to make the final analysis of the three learning logs an obligatory assignment, which we did not assess. We believed that the alterations made with regards to content and structure should in itself motivate the students to make a reflective analysis of their learning logs.

Compared to the first year, the students were less resistant towards the learning logs the second year, and we received less questions about the purpose, how to write, etc. We think that this was an effect of the clearer guidelines, but also that we had allocated more time to explain the purpose and the gains from writing the log. There were, however, still a couple of students who thought that the learning logs were merely a waste of time.

The quality of the learning logs improved in that all three areas (the project, the group, the learning) were covered in most of the cases. Still, those who rejected the idea did not write much more than one page, but they did cover all three areas, although not many reflections were made.

The learning seminars also improved with regards to the content, but the discussions did not “take off” as we expected. It seemed like the questions became a check list, and when all questions were answered, the discussion was over. The deep discussions, maybe referring to theories from the literature, were still lacking. Actually, the given questions seemed to repress the willingness to discuss among the students. This tendency increased during the semester. At the first seminar, the students were eager to present their projects for each other and to get feed-back from the others on what to do and how to do things better. At the last seminar the questions were more dutifully run through, and then the discussion dealt with irrelevant matters for the rest of the time. Despite of the questions, then, the same pattern as the first year appeared.

The analysis of the previous learning logs also this time showed students’ ability to reflect, and that most of the students had noticed a progression in their learning. The quality of the analysis was however not as high as previous year, when the assignment were assessed. It is obviously so, that the students put in more effort in
the analysis if their grade is depending on it. Anyhow, the course evaluation showed that most of the students found the learning logs as a useful tool for reflection, although somewhat time consuming.

Next year, we have discussed further alterations in order to handle the problems encountered and to enhance reflection. First of all, the first submitted learning log will be commented by the teacher and returned to the students. This way we can encourage reflective writing and push the reluctant writers forward. Secondly, we will formulate different questions to discuss at each learning seminar. The students will then not be able to answer questions by routine, instead they will have to think about their projects in new ways in every seminar. The questions should also be formulated in a way that makes reflection necessary. Thirdly, we will give the students instructions to use theories in the discussions at the seminars. In order to accomplish this, the questions that should be discussed will be distributed in the beginning of each three-week-period, and thus also used to guide the writing of the learning logs. This will probably give rise to more interesting discussions, and a deeper understanding of both the project process and the group process.

CONCLUSIONS AND ADVICE

Learning logs could in our experience be a good way of making students reflect about what they are doing, and to make them relate their actions to theoretical knowledge. The method could be especially beneficial for entrepreneurship students, since they are often very action-oriented, and not very theoretically driven. Writing learning logs forces the students to at least think about their actions.

In our experience, there is however some aspects that has to be considered before introducing learning logs in entrepreneurship educations:

1. Unstructured or structured learning logs. Our purpose of introducing the learning log was to make the students reflect upon their actions and the theories. We found that with more guidance and structure, more students wrote reflective papers. Guidance and structure seem to help those students that are not used to writing learning logs to become better reflective writers. However, we propose that feed-back on at least the first submitted learning log would further improve the writing, and also motivate the students to proceed with their learning logs.

2. Assessment or not. The assessment of the final analysis of the previously written learning logs did improve the quality of the analysis. However, we propose that with more structure in the learning logs and the seminars, the quality may be maintained without a formal assessment.

3. Learning seminars or not. The learning seminars are our own idea, which normally is not a part of the learning log teaching method. We introduced the seminars in order to further deepen the students’ knowledge in discussing other projects. Knowledge about the experiences made in the other projects broadened the students’ view of both the project process and the group process. It seems clear that the learning seminars also benefit from structure, at least as far as the content is concerned. But structure also seems to reduce openness for discussion, which in turn may hinder reflection. We propose a closer connection between the structure of the learning log and the structure of the seminar in order to enhance reflection and bridge the gap between action and theory. With questions that encourage reflection we believe that the students will not only learn from each others’ projects, but also from each others thoughts.
REFERENCES


(Translated: Knowledge in action)
