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DISCUSSION ON METHODOLOGY TO GO UP AND DOWN LEARNING STEPLADDER PROPERLY: FROM A COMPARATIVE STUDY OF SUPERVISION IN PBL AND RELATIONSHIP BUILDING IN SERVICE LEARNING

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Abstract: This article is a comparative study between a Japanese and a Danish higher educational institution with respect to designing an active learning environment. This study focuses on the pedagogy and supervisor that support students to embody citizenship and/or embodying an academic habitus, in combination with specific course related competencies and learning goals. We found a fruitful inspiration in a comparison of learning activities and shared challenges across the two institutions. In this article we wish to focus on: A) how this way of organizing learning is helpful in supporting the students' embodiment of a professional and independent habitus (psychology) or the embodiment of citizenship (service learning) as well as the specific learning goals of the course (communicate, organize the project, apply relevant theory and methods etc.), B) the supervisors' role with regard to supervising these product of Interventions Oriented Projects ('IOP') in Problem Based Learning and the possibilities and challenges this raises; here apply the Step-Ladder model.

Keywords: Identity, Citizenship education, Intervention, Trajectory, Bildung

Introduction

Comparative research between PBL and service learning

Educators have a mission to motivate learning to the students because learners are a producer to create a desirable future. For this reason, learners engage not only to acquire knowledge but also to build knowledge. When you go to university it is not only to gather knowledge as information but also to enrich recognition of things as an exemplary learner. Ritsumeikan University (Japan) which the first writer belongs, set a vision for 2020 as "achieving learner-centered education which stresses diversity and the individual" in 2011.

This research is a comparative study between Japan and Denmark on creating an active learning environment which facilitates participatory learning involving various people.

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Therefore, this study focuses on the methodology of teaching humble and compassionate students as reflective learners.

We carried an action research on the educational practice. This research began with the opportunity the 1st author staying as a guest researcher at Aalborg University (AAU) to reconsidering the educational framework of service learning which has been developed in the United States. There are some difficulties to apply the framework to Japan since most of the theories and practices are based on learner's individual/personal growth (e.g., "Lens Model" by Cone & Harris, 1996). So, Japanese higher education should learn from theories and practices other than the United States. Hence, authors conducted research meetings at AAU from April 2017 and exchanged opinions on each practice. The contents are summarized as ethnography.

The Step-Ladder Model

Both service learning and Project Oriented Problem Based Learning (POPBL) as it is taught at AAU start by facing a problem and solving this challenge including a development of their personal attitude. In other words, we can find a connection between POPBL that emphasizes identity-constituting aspects to advanced service learning which is considered to be a methodology for cultivating citizenship.

The second author has simplified "the Decision Ladder Template" (Rasmussen, 1976) into "the Step-Ladder model" for supervision on practical pedagogical work at institutions (Jensen, 1991). Originally, the template is based on the data processing, but the Step-Ladder model is conceptualized broader as a model of people solving problems as part of their work.

The model is explained with examples from the pedagogical work in which it was developed. Pedagogues start at the bottom left of step 1 to detect the problem. From here you go to step 2 where you collect information about the problem, situation etc. Subsequently, you create an overall overview of the whole situation - step 3. This overview is compared with the objective of working - step 4 - after which you proceed with choosing actions - step 5. These actions are planned more carefully - step 6 - and put into effect - step 7th.

When you go all this way, you are going through an analysis of the problem, but it takes time. Therefore, pedagogues do that only, when there are problems beyond the usual. For the more common problems, they use the shortcuts that are categorized as "skills" and "rule based actions". Skills are something s/he does without thinking and often practitioners cannot

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remember s/he they have done this. Often s/he cannot even explain how to do skills because they are automated. Rule based actions are used when recognizing the problem or situation as well known, so there is no need to analyze further. Rule based actions are shortcuts which are also typical of the way old employees hand knowledge on to new ones as recipes. “If you have this problem you just do that to handle it”.

Both the skills and rule based actions are necessary in everyday life. There is no time to analyze all problems and situations faced. At the same time, however, it can function as short circuits. Pedagogues keep on handling certain situations or children in the same way support without noticing that maybe they do not need to support quite as much anymore because the children can manage by themselves. In daily work a staff builds a number of skills and rule based actions that are necessary for the fluency of work. Sometimes when pedagogues get stuck in the educational work it might be because they short-circuit precisely by using these skills and rule based actions.

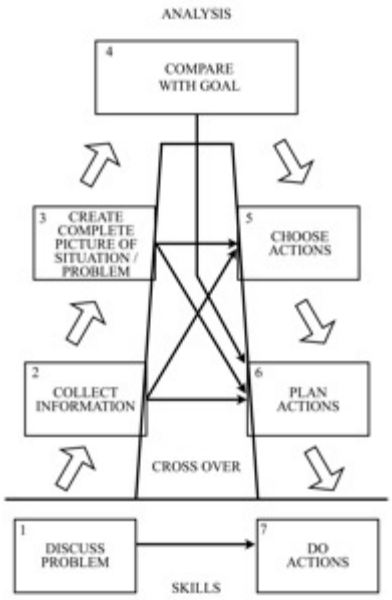

Figure 1: The Step-Ladder model (Jensen, 1991)

In supervision, the pedagogue describes the problem or situation to the supervisor. The supervisor then has the task of facilitating an analysis the problem in detail - or in other words, passing up and down the step latter without shortcuts. This is done partly by asking many questions to make the pedagogue describe the problem/situation without implicit premises or generalized understandings. When the supervisor in this way enforces a thorough analysis the pedagogue can often see the problem/situation in a new light and even find new opportunities for action by himself/herself. The main task of the supervisor is to assist the process and not to provide super solutions.

In short, the Step-Ladder model addresses a specific aspects of the supervision process, namely the challenges that arise with respect to ways of understanding the problem and all aspects related to understanding and intervening and acting (‘solving’) it (epistemological, theoretical, methodological, action based level, time organization, logistics etc.). It means this model is a metaphor of learning process and a helpful pedagogical model for the supervisor: go up and down the ladder in order to develop a new understanding, but still having a foot on the ground meaning application of knowledge and acting in practice. The supervisor must orchestrate a good rhythm of supervision and process.

Cases

Service Learning in liberal arts education at Ritsumeikan Universtiy

Ritsumeikan University is one of the most prestigious private universities in Japan. The service learning center at Ritsumeikan University (RUSLC) was established in 2004 (as a volunteer center, restructured in 2008), and is the pioneer center entitled “service learning” in Japan. This center has provided 6 kinds of courses (totally about 20 classes) at different campuses (i.e; Kyoto: 2005, Shiga: 2007 and Osaka: 2015).

In this research, we will treat the case of "Citizenship Studies I" (full-year 2 credits) by RUSLC. This class is aimed at obtaining diverse learning in the process of formation, maintenance and development of group through onsite activities at more than 42 hours. In addition, the characteristics of learning, the growth of students and the method of evaluation in this class have been clarified in previous studies (e.g. Yamaguchi, et al. 2017).

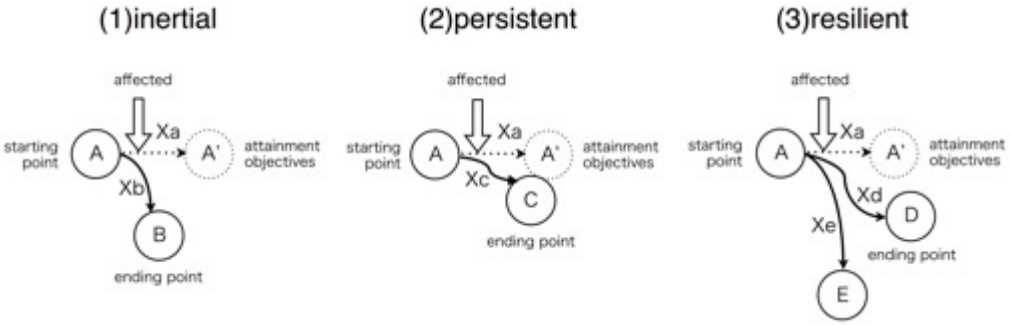

Figure 2: 3 types of trajectory in service learning program

The first author has been taking a role to coordinate RUSLC curriculum since 2010 and also working on research from the viewpoint of social psychology. A former study (Yamaguchi & Kawai, 2016) revealed three patterns in service learning. Specifically, when considering the linear model as the basic form for the attainment objectives, the service/learning trajectory is either (1) inertial or (2) persistent or (3) resilient as Figure 2. "A"

is a starting point of the project. "A'" is an attainment object which is desired as a goal at the starting point. And "Xa" is an expected process which is imagined at the starting point. However, the entire project affected some influence in the progress.

(1) The inertial trajectory was seen in the less motivated group due to some factor (in editing by public relations magazines of local municipality). In experiential learning, supervisors promptly understand the meaning of activities. In this type, students finished their project at point B by excessively adapting to the environmental change from the start of the activity, or by inertial acceptance. In any case, the original goal was not achieved, the students justify the influences given to that activity and the students accept their finish point (unachieved goal) as a fate. On the other hand, host organization and faculty and administrative staffs were not satisfied or could not agree on the point and students behavior. This trajectory was brought by lack of knowledge, attitudes, and skills through the project. But individual students matter does not cause this inertial progression alone. For example, this trajectory is brought by program design, student communication problems and so on.

(2) The persistent trajectory was seen fulfilled by strong leadership or gentle followership with a high responsibility (in supporting activities to the annual festival at the shrine). This is one of a type of responding positively to environmental changes. In this model, students assumed environmental changes beforehand, and moderate the project to the point C to close to the set goal originally. In the sense that C is not A', it can be treated as unachieved. But this trajectory means that students responded strongly to environmental change. As a positive aspect, students organized their group as a unity one to act to face the original goal. On the other hand, its toughness was a little rigid. In other words, the persistence of the group made the meanings of the activities by the students closed among themselves.

(3) The resilient trajectory was seen in moderated relationship among students, faculties, administration staff and community members (in disaster revitalizing support activities). In this type, students were planning a scenario positively by accepting the change. Then they proposed new multiple targets such as D and E to the host organization to make a consensus. In this project, the group had flexibility. Members welcomed the new idea to enhance possibility because they respected multiplicity related to goals and actions. Thus, if the project has some diversity within the group, the group is opened to accept environmental change. So this kind of the trajectory can be treated as a resilient community. In this type, reflective learners deepen their learning, but the reflective thinking does not always enrich services.

Project oriented PBL in psychology at AAU

Projects as part of the study of psychology at AAU can schematically be described as two kinds: intervention-oriented projects (IOP) and study-oriented projects (SOP).

IOP has a frame where a problem or need in the practical world is the starting point. The problem is often delimited and not something the students can freely choose. The students take on the challenge of solving a problem or satisfying a need of an external organization etc. or choose within course limits a problem to solve. The crucial aspect is that the problem is in some aspects decided upon in advance by the external organization, and that the group within a certain timeframe should end up with a product, suggesting solutions to the problem or fulfilling the need. The IOP projects are usually initiated by experienced students during the master levels study (7-9 semester).

SOP is framed by an interest in developing knowledge with respect to a problem, with the academic researcher as a role model. This way of organizing project work is central to the first three years of study during the bachelor's degree in psychology, every second semester (2, 4, 6 semester). As Kolmos's typology, this type of project is framed as "subject project" (Kolmos, 1996, p.143). This kind of projects has certain limits and thematic and methodological framing, but it is otherwise up the students' to identify a relevant and interesting problem. This kind of project is modeled after scientific research where the aim is to develop knowledge or new empirical research, but it is also part of education with the additional goal of the students to develop a professional academic habitus on how a psychologist approach a problem and analyze it. In this text we focus on IOP.

During the process of supervision of IOP the supervisor hopefully and often engages himself in the project and in the students' professional development. In the same way, the students hopefully and often engage themselves in the project because of the possibility of impacting on the choice of approach, theory and method. Along with this process the complex issue, the partner relationship, the group organization and the time pressure may bring unknown forces and processes into play. But the supervisor may also contribute to bringing unknown processes into play, so both student and teacher can promote and derail the scientific examination of the issue and the students' outcome of the project process, depending on the handling of these processes. This kind of professional/personal processes is not the focus of this article, but they are nonetheless important to acknowledge.

Thus, in this comparative study, the first author examined practical matters about philosophy and methodology with the cooperation of the second and third author by staying at

AAU who has actively introduced PBL as one of the reforming universities. We explored the possibilities for future improvement of service learning and POPBL, especially in programs where teachers are expected to play a role as a supervisor.

Discussion

Learning Trajectories and the Step-Ladder model

As shown by Furco (1996), it is important for service and learning to balance between service and learning. However, as the well-known terminology of Sigmon (1996), service learning is formed to service emphasis (Sl) or learning bias (sL) or both services and learning floundered (sl) due to the attitudes of teachers and students, so it is rare to carry service and learning smoothly (SL). So RUSLC has tried to develop each course not so much structured at the planning stage and gradually matured along the service/learning flow: at first, students are required to do something that everyone can (i.e. group work), and later students must find their own roles in the services and their learning (teamwork).

As based on this typology, inertial project is “sl” type of service learning. Of course, students did given tasks. And students submitted their academic resources within the deadline. However, there is little solidarity among them. Also, the relationship among students, supervisor and collaborative practitioners were weaker than in the other projects. This was a project at the city hall. So this tendency would be caused by the result of more emphasis on fairness and compliance, where each relationship were not so strong relatively.

And a persistent project is “Sl” type of service learning. The consciousness to take a role to succeed the tradition that lasts 120 years was embedded in the project. Informal meetings were frequently carried out on site. The minimum requirement is 42 hours volunteering, yet the average time of the members was over 60 hours. Many opportunities had been set to wear official uniforms on the site preparing the day. Therefore, not only the students but also the hosting organizations had a strong sense of solidarity. So students were satisfied with the outcomes of the service, but the elements of learning were relatively low. It means this project was acting-oriented, not thinking-oriented.

The figure on the right is a resilient project and this is sL. In the field where serious damage was brought, students faced much of scenes and narratives beyond their imagination. The supervisor drove minibus to take them to places where it was difficult to access by public transportation so students could have various opportunities to know about the damage and revitalization. On the other hand, if students wanted to contribute something to the community,

they spend time together with the residents to hear their experience. It means this project was thinking-oriented, not acting-oriented.

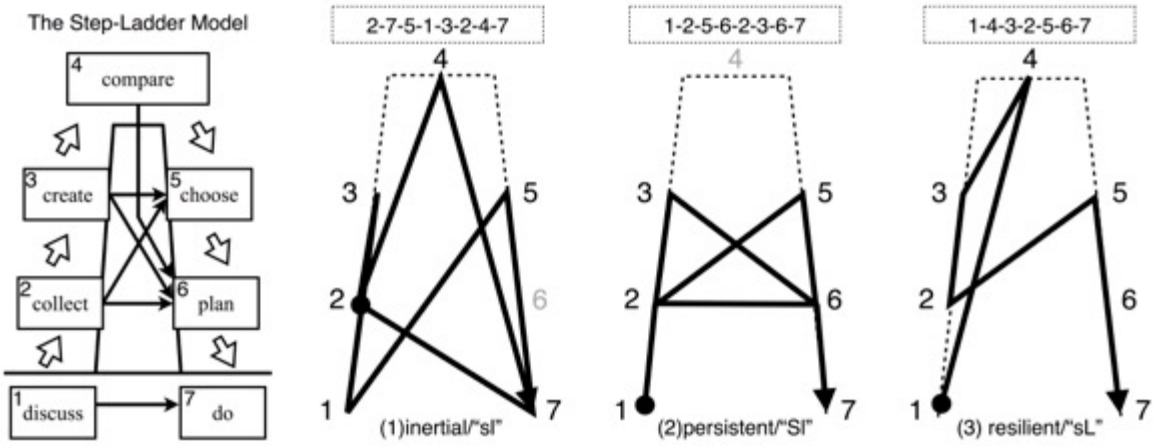

Figure 3: process of each activities traced in the Step-ladder model

With the Step-Ladder model, the supervisor can visualize what kind of pattern students' learning community faced in service/learning. The trajectories in Figure 2 are simplified based on the final result where figure 3 depicts what kind of process the project indicated by the three types of service learning. (1) Inertial/"sl" project started with information gathering, and the learning community made inadequate formulation and analysis of the problem. (2) Persistent/"Sl" project started with formulating the problem and gathering information without imaging the final goal of the project, so the process looped between planning and acting. And (3) resilient/"sL" started by imagining the final goal so students spent the time in deepening thinking with less information and finished insufficient to refine concrete action.

So, how does the supervisor intervene to the community of practice to balance between service and learning appropriately? Let's take a closer look at the case of AAU.

The Step-Ladder model and supervising projects at AAU.

The Step-Ladder model was developed to handle problems in everyday life of pedagogues. If we apply this to the projects at AAU there could be obvious use of it in IOP. Here students will meet problems where they have made a shortcut/-circuit and need to collect information to create a complete picture of the situation/problem. Such problems could be termed 'instrumental problems' but these are only one kind of obstacles met.

If problems could always be solved within a closed frame with a limited number of solutions to choose among and clear criteria for the best solution then it could be seen as an instrumental question: to gather enough information to evaluate the different actions. If the problem on the other hand include normative aspects and/or if the problem can be delimited

in different ways depending on interests of the participants and/or if the problem and criteria for a good solution can only be decided along the way, then you have to consider the influence of your approach and your engagement in the problem. This would also demand a development of your professional habitus as professional and as academic.

Students sometimes have strong presuppositions that make them exclude some theories or empirical research and this could resemble shortcuts/-circuits in the Step-Ladder model. If we look at the left side of the step ladder then the process of collecting information and creating a complete picture of the situation/problem would include collecting different theoretical and empirical research on the problem and then find out how these relate to each other and how you can handle these diverse approaches to the phenomenon studied.

This inevitably implies a personal challenge since you also have to consider your own standpoint on ontological and epistemological questions. These considerations should also be appropriated as the way you approach problems and challenges in your work. You should develop a professional habitus – a way of handling professional work that incorporates considerations and knowledge currently accepted within your particular professional field.

This is parallel to service learning where the aim is to develop personal characteristic as democratic engagement. Problem solving is no longer only a technical problem but also imply a professional and a citizen standpoint. A field-project which deliver a solution but with little learning as so-called "Sl" could be a good solution but without developing an attitude of democracy and engagement in the local community. Likewise a project at AAU where students write a report which satisfies academic standards but where they did not consider their personal attitude to the project, psychology and science could include only instrumental learning and with no influence on their professional habitus (Feilberg, 2014, 2017).

The Step-Ladder model was originally developed on research in technicians solving technical problems in electronic equipment. Here we use it for understanding supervision on students and it seems that important aspects of the changes in personal attitude are not highlighted enough in the model. Since this is an important interest both in POPBL and in service learning the aspect of supervising these processes should be focused in another way.

The shortcuts/-circuits could bring about strong pre-understandings which are difficult to change or which are not changed because of too little energy/attention for the project – it is handled as routine. Another reason could be attitudes, norms and personal unwillingness to change. A supervisor has to be aware of the different reasons for blocking reorientation since different interventions are needed in the supervision of students. Furthermore, students need

to be aware of how their work is hindered and how to deal with that situation by themselves in the future. These notions were touched upon previously from the case of the three types of trajectories in service learning programs. Students can raise awareness and readiness for learning more easily by making these processes explicit in supervision. The supervisor should act as a role model since the projects resemble research projects. The students then engage as legitimate participatory members of a community of practice with the supervisor as the master (Lave & Wenger, 1990).

Conclusion

This research could find similarities in the educational framework between POPBL in psychology and service learning in liberal arts education. In both cases, we are interested in changing or at least influence a change in identity or personality. In POPBL, supervisors want them to undergo 'bildung' (e.g. Gadamer, 1993; Kemp, 2010) processes which let the students' embody aspects of the professional and academic habitus, such as self-reflection and a reflected mind of their own with respect to the topics or challenges they meet during their professional career. In service learning, supervisors want to develop citizenship and democracy as personal attitudes.

When there is a relevant pairing with a problem (or other aspects of the process) and the existential standpoint of the student, the student will naturally engage him/herself in the process. In contrast, if there is no engagement, there is no 'bildung' of a professional habitus or no development of citizenship; this is the strength of this pedagogical philosophy.

So, in either case, POPBL and service learning, an important point in learning is how to decide which is the appropriate way to state the goal. That is why supervisors need to support students' verbalization. Understanding the problems in the learning is situated matters for the students. As the process evolves, students might need to redefine the problem to solve through their learning. As a result, the goal of the project will be changed.

Through putting themselves in these processes of learning, students are taught the professional habitus or citizenship and the competencies of the course in two ways: 1) by solving the problem and 2) by the supervising in solving the problem through collaboration with co-students, and interaction with external partners and organizations etc. That action is a twofold process: A) copying/imitation of the master (supervisor, co-student, etc.) or the ideas and ideologies of a field, and later B) identifying one's own voice and position to establish their own discipline or to become a democratic citizen.

However, service learning is in a different process a little from POPBL, especially in the case of the project which is not aimed to solve a problem. All of service learning programs are framed at contributing to the community betterment through services. Yet the most distinguishable point between service learning and POPBL is that pedagogy of service learning is featured to develop their own personal identity in civil society. Therefore, students may be confused about what to do and how far is their project achieved in the curriculum.

Another aspect is learning that students are actually playing an important role in this change of stating the goal as organizer of the project/service, so students should realize your own part in the learning. Both in POPBL and service learning is required that students reconfigure the goal of their project/service with their consciousness to carry out the project. Therefore, students should realize their own role in the learning.

These processes are parallel in POPBL and in service learning at least if the students themselves decide the project or what and how to do volunteering. Choosing a topic by themselves is a crucial process in both cases for cultivating students ownership through supervising. The Step-Ladder model helps to show students the process they are experiencing. At the top of the ladder, you compare your knowledge at that state with the purpose – that is reflected in the problem in POPBL and the setting/outcomes in service learning.

Hence, the Step-Ladder model is a critical tool for supervising POPBL and service learning because the model helps to find their location in the learning/service process and determine the next (not only fore but also back) step to the students. The real world problem can be understood in various ways. The goal of POPBL will change depending on how students have figured out the essence of the problem. In service learning, if students can prioritize the services required by civil society, their trajectory of learning and speed to achieve the goal will be appropriate. And students will be able to recognize advice from supervisors on knowledge, attitudes and skills they have to embody for on-site betterment.

For the further study, we will examine the rules and roles to climb and down the Step-Ladder by students, through adopting the experience of the third author in charge of the semester coordinator for the 1 and 2 semester in the department of psychology in AAU.

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