Organizational Challenges in Hybrid Learning Environments

A Case Study of the Learning Environment at the Swedish Defence University – The Grey Area between Theory and Practice

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Higher education has changed both from a historical and international perspective in that there are greater demands for cooperation between academia and society.[1] In Sweden, the issue of collaboration between practitioners and researchers has been a matter for debate since the 1970s, a debate which has developed significantly since its inception. Public discussion, political incentives, including a demand for research from practitioners, have led to a range of efforts and strategies to unite a seemingly inaccessible academic community with a society that craves knowledge.[2] Since the 1990s, it has been deemed critical for universities to maintain quality, not only in education, but also in research, while at the same time ensuring that both are socially relevant. A utilitarian aspect emerged in research practices. A unique example of an environment in which academia meets practice and utilitarian application is in focus can be found at the Swedish Defence University (SeDU).

SeDU's theoretical and applied research is conducted within the general field of defence and security. Research focuses on civil and military issues spanning a range of disciplinary perspectives including behavioural, social and natural sciences as well as technical subjects. There are also a number of areas of focus in which research is conducted that cannot be found at other universities or research institutes in Sweden. The holistic and integrative approach found there makes it unique from both national and international perspectives.[3] The above characteristics make SeDU's learning environment particularly interesting where research is concerned, especially as there is a lack of previous comparable studies in that specific context.

The Learning Environment at the Swedish Defence University

What characterizes a particular learning environment? Olstedt and Lönnheden[4] define learning environments from the perspective of Söderberg's architecture theory of the four main functions of spaces : the physical, functional, social and symbolic. How these are constructed varies enormously across educational institutions. They then discuss how expectations about learning environments are affected by fundamental epistemological

[1] Tapp, 2004.
[2] Salminen-Karlsson & Wallgren, 2008.
[3] Försvarshögskolan, 2016.
[4] Olstedt & Lönnheden, 2005.

beliefs. There can be variations between lecture-style teaching on the one hand, and teaching configurations in which participants contribute on a more equal basis, on the other. The range of expectations varies substantially between different universities and tertiary educational institutions. Olstedt and Lönnheden[5] discuss further dimensions of learning environments, namely : their dualistic, relativistic and engagement dimensions, which can determine the degree of commitment and how permissive of critical thinking and debate these environments are. These different dimensions are representative of the attractiveness of the learning process and can constitute an incentive or a disincentive to learn.[6] For some, a particular learning environment can induce passivity, while in others the same environment induces engagement. In order to study the environment at the SEDU we first need to describe its main characteristics.

SEDU's learning environment is officially portrayed as "*an attractive, creative, dynamic and coherent research environment to which reputable researchers are drawn and stay*". A consequence of this is that it often contributes to much sought-after researcher training in order to meet the specific needs of partners in the defence and security sectors as well as within the crisis management system. The SEDU aims also to steadily increase the proportion of research funded through successful applications for grants from external sources. Moreover an interdisciplinary approach is encouraged in research activities, which also has an effect upon the learning environment.[7] According to Olstedt,[8] university teaching environments are affected by the physical space and its buildings, organization, social relations and cultural patterns. We have observed also that the learning environment at the SEDU is affected partly by the manner in which it is exposed to competition and partly by the societal demands placed upon it by its clients.

SEDU's physical environment is mainly characterized by military adornments and other symbols of the military tradition. In this physical environment, the boundary between practitioners and academics tends to become blurred : military personnel, civilian teachers and students as well as researchers with a military background are represented. Individuals from all of these groups work on research issues, hold administrative posts, and are engaged in different ways in different research activities. This proximity between the civilian academic and military cultures leaves its mark on the learning environment. This is particularly evident in the form of funding from the armed forces to meet their own training and research needs. The armed forces' needs are characterized by utilitarian demands leading to a focus on the following :

> …developing knowledge and data in order to deliver the results to operational divisions and units who produce equipment. The information generated should provide the armed forces with the basis it needs to make decisions in relation to threats and their potential development. It is also of importance that these

[5] *Ibid.*
[6] Olstedt. 2001.
[7] Försvarshögskolan, 2016.
[8] Olstedt, 2003.

> contribute to the ability to decide which countermeasures are required in the form of materiel and tactical stances as well as to establish which risks the authority should consciously take. Research conducted by and on behalf of the Swedish armed forces is of high quality and constitutes an important part of Sweden's exchange of information and knowledge with other countries and organizations. This kind of international cooperation will become increasingly important. The transfer of research results to the operational organization can be done for example in the form of new concepts for strategy and logistics or through the development of new technologies such as, thermite charges for clearing mines in maritime environments.[9]

The relationship between the Armed Forces as its main client, and the SEDU as contractor, is one of interdependence, which in turn affects the learning environment. Before we focus on methodological approaches, we shall briefly describe the theoretical framework which is most appropriate to describe the type of organization that the SEDU and the Armed Forces represent.

The Effect of Organizational Type on the Learning Environment

Both the SEDU and the Swedish Armed Forces can be classified as greedy institutions.[10] Greedy institutions place higher demands on their employees in terms of physical and psychological perseverance, their ability to manage stress, competence, long working hours, constant availability, unwavering loyalty and the depth of their engagement, but offer less in return to their members, the employees.[11] Military organizations can be classified as among the greediest types of institution because they require their members to be prepared to sacrifice their health and lives for the organization's sake. According to Wright *et al.*,[12] third-level educational institutions are also breeding grounds where institutional greed flourishes. Flexible and unsocial working hours, increasing demands for qualifications and excellence, are just some of the indicators of academic greed.

In addition to being greedy institutions, both the SEDU and the Armed Forces can be considered meritocratic organizations, i.e. organizations that judge the competence of their employees in terms of skilfulness, knowledge and acquired competences, rather than of non-merit factors such as age, background and gender.[13] It is academic and pedagogical merits and in the case of the armed forces relative military rank and performance which create potential for promotion within organizations with hierarchical systems.[14] Meritocracy and institutional greed place even higher demands on personnel in the form of rewarding meritocratic attitudes, academic success and, partly, personal sacrifice.[15] Both acquire a double importance in the context of the SEDU's learning environment which can be seen as

[9] Försvarsmakten, 2015.
[10] Coser, 1974.
[11] *Ibid.*
[12] Wright *et al.*, 2004.
[13] Castilla & Benard, 2010.
[14] Ydén, 2008.
[15] Currie *et al.*, 2000.

lying in the grey zone between theory and practice. They can also manifest themselves in the habits and routines of the organizations' employees. According to Giddens,[16] despite the willingness and ability to behave otherwise, social practices maintain and reinforce culture clashes which in turn can affect the learning environment and the learning process.

The Purpose of this Study

There is insufficient knowledge about learning environments in the grey area between practice and theory. As a result, the associated issues need to be formulated and studied qualitatively. The aim of this article is twofold. Our ambition is partly to identify the type of learning environment that can be found at the SEDU, and partly to reach a deeper understanding of the factors which influence that particular learning environment between theory and military.

Material and Methodological Approach

The method used in this study is qualitative. The methodological approach is partially auto-ethnographic, meaning that the researchers study themselves and their own research processes.[17] We have taken this auto-ethnographic stance further by studying our own research environment. The qualitative analysis is thus inductive and exploratory: we employ the classical approach of generating theory from an empirical foundation.[18]

This approach is well-suited for the purpose since, as previously mentioned, little research has been conducted on the learning environment in the selected university. The specific groups in focus have never been previously studied either, making an inductive exploratory approach an appropriate point of departure. According to the guidelines for the theory of empirical data generation ("Grounded Theory") developed by Glaser and Strauss,[19] the selection of informants should ensure as wide a variety of experience and skills as possible. Informants were selected, therefore, according to their position within the SEDU and represent senior managers, employees, and senior academics and doctoral students. Moreover, there were representatives from both the civilian and military academic culture. A total of six informants were interviewed: a professor, a graduate student, two military and two civilian managers, all employed in different positions within the organization. Of these six respondents, only one was a woman. According to the 2015 SEDU annual report,[20] the proportion of women employed amounts to 27 percent of its highly qualified labour force.

It may seem that six informants are insufficient, but if the collected interviews have been faithful to all the principles of grounded theory, then fewer interviews are actually preferable. According to the *Sage Handbook of Grounded Theory*,[21] "*the better the quality*

[16] Giddens, 1984.
[17] See for example : Ellis & Bochner 2003.
[18] Starrin *et al.*, 1991; Glaser and Strauss, 1967.
[19] Glaser & Strauss, 1967.
[20] Försvarshögskolan, 2015*a*.
[21] Bryant & Charmaz 2007, p.230.

of the data, the fewer the interviews required". The resulting model thus follows the principle of theoretical saturation[22] and the requirements for reliability and generalizability. We argue that three interviews are sufficient to address the issues formulated. According to Holton and Walsh,[23] Glaser cautions against "*data overwhelm*" in the collection processes, namely the collection of too much data. It is more important to make a meaningful analysis than to collect too many interviews.

The interviews followed an established interview guide with a number of themes. The guide contained open questions which were followed by situation-specific follow-up questions such as "tell or describe more", "what is meant by this", etc. Glaser and Strauss[24] argue that the informants themselves should be able to formulate their own reasoning and answers with as little control from the interviewer as possible. The themes selected related to the interviewees' current work situation at the SEDU, their working environment, and the factors that contributed to the relative extent to which they enjoyed working there. The interviews were conducted during the period September to November 2015. They took place at the informants' workplaces in Stockholm and Karlstad. All interviews were taped, transcribed in full, and coded to protect the identity of the respondent. They were then analyzed according to the grounded theory approach.[25] The first step in the analysis consisted of what is called open coding, which entails identifying meaningful units, that is, codes, in each individual interview. They could for example concern specific thought patterns, emotions or actions related to the focus of the interview questions. An example of a code is given below:

> Then I have a theory that no one is buying, and when I talked difficult decisions, the 51 percenters, the ones that can go either way, I really believe in luck, not luck throughout the whole career, but when faced with a new very big challenge and you choose which option to take, you cannot anticipate the consequences of the first decisions you take and if you have been unlucky with them everything else that follows is unsuccessful, but the outcome may be the complete opposite if you make some really successful decisions in the beginning making everything much easier then. I really believe that luck has very little significance after that, but right in the beginning you have to be lucky.

This quote along with several others, are coded as decision-making. Step two in the analysis was to assess and then sort codes with similar meaning into categories. In the above example the code decision-making was sorted under the category of leadership. The category leadership was further sorted under the common, overarching category, bureaucratization. A third step involved comparing broad categories, categories and codes, and resulted in a hypothetical model with a core variable which we chose to call "hybrid learning environments".

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[22] Glaser & Strauss, 1967; Glaser 1978; Glaser 2011.
[23] Holton & Walsh, 2016.
[24] Glaser & Strauss, 1967.
[25] Glaser & Strauss, 1967 ; Starrin *et al*., 1991 ; Hartman, 2001.

Following this methodological overview, the results section is presented through an initial introduction of the core variable and its definition. The core variable's constituent components, namely the categories, are in turn exemplified using codes and quotes. The results section is presented with an emphasis on empiricism, while the analysis and discussion provide a more theoretical linkage.

Hybrid Learning Environments

By hybrid we mean a combination of civilian academic and military practical training which each contributes to the construction of the learning environment. We believe that the SeDU environment is a hybrid learning one that is influenced by a number of categories, identified in the data. These categories are : culture clashes, boundary transgressions, utilitarian demands, and a demand for an understanding of the influence of bureaucracy. The categories that emerged in the analysis can potentially be both favourable and unfavourable from the perspective of the physical, functional, social and symbolic learning environment. In addition, these categories impact the degree to which the environment is conducive to debate, an open climate and consequently, learning itself.

Culture Clashes in the Environment

When the two different cultures meet at SeDU, they have an impact on the learning process. As both are greedy institutions with parallel hierarchies they have their own unique requirements and expectations about both staff and students. The cultural clashes that emerged from the data analysis generated both obstacles and opportunities. One such impediment could arise when a "clash" of expectations turned into conflict due to a lack of understanding of the differences between these cultures. The potential for such culture clashes can on the other hand lead to better organizational integration, greater adaptability to each other's differences and the development of a common culture. This quotation from a military commander gives expression to the outcomes of these culture clashes:

> Here (at the SeDU) I don't think that I have ever had any success when I said how I want things at an early stage, I had to then change my mind. But the people in (unit name) nagged the whole time, "*but tell us how you want it now, then and we will do as you say*", and it may have a little to do with cultural difference, that the military would love to have someone directing them. Here, I have to rationalize and explain my reasons more.

Aspects of Boundary Transgressions

Another factor that influences the learning environment is that of boundary transgressions. These can result from (1) the extent to which the different subjects may influence each other ; (2) the geographical proximity to other universities of the different sites where the SeDU is located)[26] ; and (3) the 'disorientation' produced by affiliation to different sites within the same university. Boundary transgressions can also be a product of (4) having assigned tasks from different funding sources on the one hand, but a demand for

[26] Its main sites are : Campus KTH Stockholm, Karlberg Military Academy in Solna, and Karolinen Campus in Karlstad.

accreditation from within your own organization on the other. In this article, we have chosen to focus on two of these issues. In the example mentioned below, the site under discussion is one of the SeDU's departments located in Karlstad where the staff is predominantly civilian and where the main academic focus is on the behavioural sciences. The department in Karlstad is geographically distant from the main SeDU site in Stockholm but close to Karlstad University where a number of its doctoral students are registered due to the fact that the SeDU does not yet have the right to confer degrees at PhD level. The geographical distance contributes to a sense that the learning environment is separated into three different physical environments. A doctoral candidate testifies to the different dilemmas they find are characteristic of the different learning environments based on their own experience:

> So I didn't know anything about the PhD environment in Stockholm until, maybe six months ago… I was at a meeting of graduate students from the institution at the SeDU. So I haven't had anything at all to do with the students in Stockholm. I didn't know about what they do or what their circumstances were, what their contracts were like or what they are working on. The environment was totally alien to me.

One informant describes certain drawbacks in having to work in different learning environments (on more than one campus) and an inability to exploit the advantages of one or other of those environments to the full. The example describes how opportunities to participate in more informal and formal academic conversations and discussions can be limited by this:

> I would really like to have been able to get more out of the theoretical and methodological discussions than I actually have. There are more seminars here than we have where people come to talk about what they are doing. Some are very interesting and there is an opportunity to ask questions. We don't have that, academic issues are much less in focus here. Here we are much more practically oriented, more hands-on in a way. I think I have gotten more from the university because they often discuss the small differences in a different way than we do. They say things like, 'oh we discussed that earlier during the break'. They discuss theories and methods in a way we don't here. But I also think our workload is higher and it's hard for us to find time for those types of discussions. From the perspective of my own learning, I could have done with more of that, but I still think that it the environment in Karlstad is more important for me.

Utilitarian Demands

A third aspect which affects the SeDU learning environment is the requirement that what is learnt should be of utility to the main client, but also to the SeDU itself and to society in general. This requirement influences PhD students as well as their faculty advisers, who have a great responsibility to both supervise the candidate while at the same time ensuring that the task is completed according to the client's wishes. The effects on the

learning environment make themselves felt on several levels, primarily due to the fact that, to some extent at least, the individuals concerned teach themselves to produce knowledge that others can make direct use of and that others will have the opportunity to learn from.

> So it feels very important because I know that everything I do is of benefit. On that level I can compare myself with someone doing an industrial doctorate. It's clear the industrial doctoral situation often itself involves a recipient, a civilian, or at least a stakeholder who expects a result and this will lead to something. And, I feel that I know that everything I do will end up in in our educational programmes, it will end up in our commissioned courses ; a lot will end up out in the civilian world. So I think that characterizes very well why I do not feel that what I do is of no use to others, it isn't just for my own pleasure but others will get something out of it.
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> It seems, when talking to university PhD students many of them feel that they receive inadequate support. But I think that because we work here, we are working so closely, at the end of the year when the results are reported in, we are required to show results, and because I have my supervisor who has also been involved in the projects themselves, he's not there now, but in those projects I have been working on for my thesis he has been the project manager. It is clear that he not just interested in helping me as a graduate student but also has a responsibility to ensure that we deliver at the end of the year, what we have promised to deliver to our customers.

The Effect of Bureaucratization

The fourth and final aspect that affects the learning environment is bureaucratization. This can be seen in the form of demands to be more effective and transparent. This is a phenomenon that has been increasing in recent years.[27] Bureaucratization demands higher levels of competence of all SeDU managers, both military and academic. Irrespective of whether they are accustomed to having a great deal of freedom (academics) or at the cutting edge of practice (military), increased administration and bureaucracy are something they all have to adapt and relate to. All of the informants expressed concern to varying degrees about bureaucratization. We have chosen some excerpts from their responses to illustrate this fact:

> Although it is a lengthy process, the idea was that I would be promoted to professor when I came here. But then it took a long time and there was a lot of nonsense, administrative nonsense. Have you got control over your work ? Pretty much so, but not completely. Previously I had been the manager at a lab with 12 employees, and a couple of them had done PhDs, and then you had your own budget and could make your own decisions, which was a kind of freedom. Here you are more limited within the matrix of the organization which is a bit of a disadvantage.
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> The opposite is true on the negative side here, you have to work harder, we should head in a particular direction but nothing happens. Then the system, I mean the SeDUs administrative management system which must have been bought on the cheap when the Soviet Union collapsed, so that makes it hard.

[27] Hemlin, 2008.

Bureaucracy is associated not only with inhibiting freedom and creativity as well as being time-consuming, but also with boundaries separating positions and responsibilities. A hybrid learning environment with a highly delineated bureaucratic system is negatively affected by all those 'greedy' factors identified earlier. An expression that is commonly in use at the SeDU characterizes it as a persistently nervous organization :

> Yes that's what I think I am developing pretty good instincts when it comes to recognizing what is and isn't a good decision, but now and then I'm a bit unsure but I think it is me that's right and that isn't a sort of officiousness, more a statement of belief, I think I coined the phrase, if you are the head of ISSL, you have to be nervous later, you can't be nervous sooner, otherwise you'll be nervous all the time, We have had an organization, SeDU as an organization is nervous all the time and it is in that world we are expected to operate and I hoped there would be a change of university director because the former one had many qualities but he had a tendency to be nervous all the time and had a great need to be in control. So although I've never really seen myself as a risk-taker, I suddenly started to wonder "*am I taking a load of risks here ?*".

This manager goes on to discuss the importance of keeping a "*cool head*", to be careful even if it causes frustration among colleagues. Thinking about the whole is one of the demands of bureaucratization. It has an indirect effect on the broader learning environment in that it adds an extra stress dimension.

> This is the way I work, I make decisions later, it annoys those around me on a regular basis, but I've learnt it's the best thing to do, and sometimes people feel bad because of that and then I have to deal with it. You have to be cautious when you are in a leadership position, I sometimes feel it turns you into a sort of instrumental psychopath, that means that sometimes you take decisions that make people feel bad, but you know that it will sort itself out. But it's not good on the whole to get involved with every personal issue.

Main Conclusions and Discussion

The aim of this article was twofold. Our ambition was to partly identify the type of learning environment that can be found at the SeDU and partly to reach a deeper understanding of the factors which influence that particular learning environment which finds itself in the grey area between theory and practice. Our qualitative study led us to the conclusion that the SeDU learning environment can be described as a hybrid one because it is made up of civilian and military components. Hybrid learning environments are affected both favourably and unfavourably by different factors such as culture clashes, boundary transgressions, utilitarian demands and bureaucratization. Each of these aspects was explored.

Culture clashes at the SeDU are the consequence of a fusion of different organizational identities each of which is premised on strong symbolic values. Military practice which has a long history and tradition meets civilian academia with its own historical development. Together they are somehow required to form a common identity and create a sense of belonging as well as a common organizational culture. An

organizational culture is distinguished by thoughts, experiences, opinions and events which are shared by several people in a particular social setting.[28] That 'culture clashes' occur is not unusual. It is important though that the clash enriches, rather than inhibits activities, as they can have a negative effect on the learning environment. This is consistent with Schein's description of different organizational cultures within the same organization[29] which tend to value internal cohesion over cohesion within the larger organization. Awareness of these differences can enable both managers and colleagues to take these differences into account with a view to optimizing the learning environment.

Boundary transgressions can be a result of belonging to different environments and can affect relations between different institutions or between the institution and the customer. One advantage of these is that they can create opportunities for the exchange of knowledge and information and give greater freedom of movement. The challenges for learning environments characterized by boundary transgressions is to create and maintain confidence building relationships, contribute to an increased ability to resolve conflicts, promote knowledge of the bigger picture, etc. SEDU staff who are connected to other universities or sources of funding can be described as 'boundary spanners', a concept which has been discussed in several studies.[30] Thune identified three different activities in which boundary spanners engage in higher education.[31] Primarily they facilitate the exchange of expertise and knowledge between different parties. They create opportunities for development and can provide a filter for information exchange, which can be both positive and negative. Finally they create a type of nexus between academia and practice that ensures that the boundaries between organizations are more elastic and dynamic as opposed to fixed and impenetrable.[32] Boundary transgression as action and boundary spanners as agents can in their most propitious forms optimize hybrid learning environments. In their less favourable forms, they can lead to the risk that doctoral students and their supervisors become trapped between researcher and employer roles, and may feel that their loyalties are divided. Other problematic aspects can include crises of confidence, conflicts of affiliation, identity problems, but also stress management issues connected to work, expectations, requirements, roles, feelings of loneliness, and fragmentation.[33]

Utilitarian demands present themselves particularly in the guise of the armed forces' demands for practical applicability in research and training which should in their view contribute to their personnel's ability to lead more effectively, take better decisions, etc. There is concern among academics that free research becomes negatively affected as a consequence of collaboration with parties outside the traditional university system. However, analysis from agencies (including the Swedish Research Council) suggests that collaboration between universities and companies maintains at least the same scholarly

[28] Jacobsen & Thorsvik, 2008.
[29] Schein, 1991.
[30] Pruitt & Schwartz, 1999 ; Weerts & Sandmann, 2010 ; Skolaski, 2012.
[31] Thune, 2010.
[32] Griffiths & Guile, 2004 ; Peach *et al*., 2011; Tarant, 2004 ; Thune, 2010.
[33] Wallgren & Dahlgren, 2007.

standard as research conducted exclusively by a university. Through collaboration, people with different abilities meet which often leads to greater competence and innovation. A great deal of the national prosperity can be attributed to the success of Swedish export companies who are constantly at the forefront of technical innovation.

Bureaucratization is described in academia as an ever intrusive process, the existence of which inhibits creativity.[34] In a learning environment it may result in poor productivity and a lack of creative solutions. Decision-makers described in the study as "careful" or the "51 percenters" are indicative of the difficulty from both the perspectives of the need for transparency and of the requirement to be able to encourage creativity.

One weakness in the study is the lack of representativeness because it is a case study. When we formulated our core variable we referred to interviews from only six informants. The study is built exclusively on self-reported data. A wider sample would have been desirable to ensure the study's general applicability. The merits of this study lie elsewhere : in the inductive auto-ethnographic approach to studying one's own research environment as well as exploring the detailed accounts provided on aspects that appear to be meaningful in terms of the learning environment under study. It is hoped that the results can be used in other tertiary education contexts when it comes to pedagogy, and contribute to creating further interest in studying different learning environments.

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