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5. Learning Landscapes, a Breeding Ground for Sustainable Educational Innovation

Experiences of Teachers Working in a Context that Aims to Support Innovative Behaviour

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The HRM study program of The Hague University of Applied Sciences (THUAS) recently replaced classical, module-based education by so-called learning landscapes in which students approach complex problems by interdisciplinary learning activities. Teachers collaborate in multi-disciplinary teams that have a shared responsibility to support students as well as to innovate their education. This new way of organizing educational processes not only need to strengthen the learning ability and flexibility of students, but also the learning and innovation ability of teachers. Our exploratory research among teachers showed that this new way of working increased their job satisfaction. However, teachers experience difficulties in implementing their ideas, which is an important precondition for sustainable educational innovation.

Sustainable educational innovation requires innovative behaviour of teachers

To anticipate changes in societal and organizational needs, universities of applied sciences need to have educational processes in place in favor of innovation that can be changed rapidly without excessive costs (WRR, 2013; The Netherlands Scientific Council for Government Policy). Since the publication of the report by the Dutch parliamentary research committee on educational innovation (Commissie Dijsselbloem, 2008) policy makers in the Netherlands are increasingly convinced that teachers play a crucial role in the realisation of successful innovations (Coppoolse, Zitter, Smid, & de Bruijn, 2014; Dochy, Berghmans, Koenen, & Segers, 2016; Geijssels, Slegers, van den Berg, & Kelchtermans, 2001; Verbiest, 2014). This line of thinking however is not new and not unique for education either. In the twentieth century, Weber (1972) already acknowledged that shop floor employees in large, complex and bureaucratic firms are typically the ones who best perceive which innovations are required and how they could be realized. In the current twenty-first century, Weber's line of thinking is still topical

When citing in APA, please refer as follows:

Potting, C., Frie, L., & Jacobs, F. (2018). Learning landscapes, a breeding ground for sustainable educational innovation: Experiences of teachers working in a context that aims to support innovative behaviour. In F. Jacobs, & E. Sjoer (Eds.), *Inspired to change: A kaleidoscope of transitions in higher education*. The Hague, The Netherlands: The Hague University of Applied Sciences.

(Wihlman, Hoppe, Wihlman, & Sandmark, 2014). The innovative behaviour of employees is still perceived as important, or even of utmost importance, for the success of organizations (e.g. Amabile, 1988; Amabile & Grysiewicz, 1989; Anderson, Potočnik, & Zhou, 2014).

Even though multiple definitions exist for innovative behaviour, there is consensus among researchers that innovation starts with a useful idea that is put into practice. Kanter (1988) describes this process as the "generation, adoption, implementation, and incorporation of new ideas" associated with different job roles. In a similar way, other researchers (e.g. Axtell et al, 2000; Frie, Potting, Sjoer, & Van der Heijden, submitted; Scott & Bruce, 1994) who partly build upon Kanter's theory, point out that innovative behaviour not only involves the development of new ideas, but moreover the activities to implement these ideas. However, these researchers point out that each individual has a certain responsibility in making sure that their ideas are realized. Jansen (2000, p. 288) used the term Innovative Work Behaviour (IWB) defined as "the intentional creation, introduction, and application of new ideas within a work role, group or organization". This is typically an iterative process not necessarily with a specific order of activities.

Working context influences innovative behaviour

There are not just personal factors that influence innovative behaviour (Baum, Frese, & Baron, 2007), but also organizational culture and the way work is organized and assigned (West & Farr, 1989). Some researchers assume that personal factors, such as problem-solving abilities (De Jong & Den Hartog, 2010), impacts on idea generation, whereas characteristics of the organization merely influence the possibility of implementing these ideas.

Kanter (1988) has been one of the first to describe the organizational features that enhance and support innovative behaviour. He assumes that during the phase of idea generation employees feel the urge to come up with new ideas. In this phase, it is important that the employee has good relationships with those people who can benefit from the employee's ideas (Van de Ven, 1986). This requires a culture in which innovation is perceived as important, such as acknowledging the importance of connecting ideas from different disciplines. The latter is associated with problem solving ability that helps to generate ideas (Runco & Chand, 1994; Scott & Bruce, 1994; Basadur, 2004).

For the implementation of ideas, following Kanter (1988), it is important that employees have access to three types of so-called markets: knowledge, resources and political support. Kanter calls these *power tools*. Knowledge helps employees to enhance their problem-solving ability by the way they can enrich and work out their ideas. Resources, such as space, time and funds, are needed to translate ideas into concrete plans.

Political support is required to create the buy-in needed to put ideas into practice. Kanter argues that organizations need to be organized in such a way that employees have easy access to these power tools. In general, complex work and a certain degree of autonomy seem to have a positive influence on innovative behaviour. This effect is strengthened if employees feel rewarded and are given the recognition from management and/or colleagues (Janssen 2000; Scott & Bruce 1994; Wihlman, Hoppe, Wihlman, & Sandmark, 2014).

Unfortunately, we do not have a blueprint for organizations that enable access to these power tools. Researchers seem to be convinced that having access to and participating in a variety of networks of internal and external partners are not only helpful in generating ideas, but can also support the implementation. In addition, it is important that management helps employees to make use of sources for generating ideas, and that they make sure that current regulations and procedures do not delimit the implementation of new ideas. As mentioned before, autonomy and multidisciplinary teams can be important as well (De Jong & Den Hartog, 2010; Kanter, 1988; Shane, 2003), although Hensel (2010) found out that working in autonomous and multidisciplinary teams not necessarily guarantees that employees will display innovative work behaviour. It also requires teams to have a shared vision, that they make use of common language, and experience the working context as supportive (see also the chapter of Hensel and Visser in this book).

In the following case study, we will illustrate how teachers experience a working context in which the aforementioned insights were incorporated to stimulate innovative behaviour.

The study programme HRM: a case study

Since 2015, teachers of the study programme HRM have been redesigning and implementing the curriculum thoroughly in multidisciplinary teams following an iterative process by which they developed so-called learning landscapes. Following Kanter's reasoning, multidisciplinary teams are supposed to support the teachers' innovative behaviour. Based on the previously described insights, three design principles for multidisciplinary teams were distilled that should support innovative work behaviour:

1. Teams have direct access to sources that could stimulate idea generation

The teachers are in close contact with the practice to gather practice assignments. In this way, they are inspired by the developments within specific practices on top of their understanding of the students' needs. By combining multiple disciplines within each team, teachers have the opportunity of learning from each other. Throughout this process, teams are responsible for the development and the delivery of new learning around a preselected theme.

2. Teams can influence to a certain extent procedures in support of the innovation process

By means of an iterative process, teams develop an educational vision in close collaboration with the management. This vision is further developed throughout the execution and continuous renewal of the different learning landscapes. For example, teachers defined new guiding principles for examination, practice oriented research and internationalisation. In this way, the educational vision and its related policies can strengthen the innovation process.

At operational level, teachers have possibilities to make use of resources for the implementation of their ideas. For example, teams can arrange important features of the digital learning environment by making use of available IT tools, such as learning management systems and grading systems.¹ The team also has the responsibility to plan educational activities for students. In this way, they can use existing systems and procedures and adapt them if needed.

3. Teams have access to power tools to put ideas into practice

Teachers receive, if they wish, support from external experts who offer trainings and workshops, for example. In addition, teachers are offered the opportunity to join networks of practitioners who could be helpful in the development and delivery of education. In addition, they can influence their available time and space. Every team member is assigned a fixed number of work hours to deliver in a learning landscape. After the alignment with the other team members, a teacher is free to decide how many hours he or she will be spending on development, planning and execution. Furthermore, the management provides political support and explicitly invites teachers to raise new ideas. The management facilitates and supports as much as possible by means of granting sufficient hours, physical space, and (financial) resources. Successes are celebrated regularly. By this, a context was created aiming to support innovative behaviour.

In our case study, our main research question was: Does this new working context support teachers in displaying innovative behaviour? Specifically, do they experience that access to the aforementioned resources helps them to renew their education? Do they feel invited and supported in generating and implementing new ideas?

¹ Blackboard, Osiris and On Stage are examples of IT tools that were used.

Research method

Online survey

We asked 31 teachers for their opinions on the basis of a series of statements using of an online survey tool. We formulated these items based on the aforementioned studies on innovation processes of professionals. Per process we will describe the type of statements that we provided.

Generation of ideas

We investigated which types of sources were used to generate ideas by statements such as: 'By making connections between different disciplines, I generate ideas for educational innovation', 'The needs and frustrations of students are a source of ideas to renew our education', and 'The needs of the occupational practice are a source of ideas to renew our education'.

Adoption of ideas

The study of Frie et al. (submitted) not only provided illustrations of the activities that professionals undertake to generate ideas, but also the considerations to decide if an idea is worth further exploration or implementation. Kanter (1988) labelled this as the adoption phase. We used such statements as the following to capture the considerations for adopting an idea: 'I go for a new idea if it fits the needs of the occupational practice', and 'I go for an idea if it fits the needs of the students'.

Implementation of ideas

We asked if the teachers had access to knowledge and skills in support of putting their ideas into practice with statements such as: 'I actively keep my knowledge of didactics up-to-date', and 'I actively approach colleagues or people in my network who have complementary expertise or skills'.

We explored if the teachers had the opinion to have access to the aforementioned power tools by statements such as: 'I have sufficient time available to develop new things for our educational innovation', and 'I make sure we have financial resources that facilitate us in the realisation of the educational innovation'. Whether teachers actively look for political support was checked with the following statement: 'I make sure that there is buy-in for my own or the team's ideas'.

Incorporation of ideas

We asked the teachers if they perceived themselves as actively integrating new ideas into existing processes with statements such as: 'I make sure that tasks are properly assigned among colleagues', 'I make sure we have a clear planning for the work to be done', and 'I make sure that innovations are incorporated into existing processes and systems'.

Experience of new working context

In the online survey, we also asked as to what extent the teachers perceived to have possibilities for innovation given the assumption of both Kanter (1988) and Hensel (2010) that a positive view about the possibilities supports the innovation process. We asked the teachers to respond to the following statements: 'Through the educational innovation I am capable of incorporating the necessary innovations in our education', 'The educational innovation enables me to fully use by talents and subject matter knowledge', and 'The educational innovation positively contributes to my job satisfaction'.

Storyboard

To enrich our picture of the strategies that teachers use to put an idea into practice, we asked each teacher during a follow-up session with the team to draw a storyboard on the process from gaining an idea until the final moment by it is incorporated. They were asked to indicate moments in their storyboard that they perceived as critical for the successful implementation of their idea. This storyboard had to describe an innovation that was realized during the past half year.

Results

In this paragraph we will review the results, starting with the summary of the feedback that was collected by the online survey, followed by the analysis of the storyboards.

Results online survey

Twenty-five of the 31 teachers responded to the online survey. Their feedback is summarized per process below, followed by how they experience their working context. We report on the percentages of positive, negative and neutral responses on the statements. If percentages did not count up to 100%, respondents did not provide an answer to this statement or reported that this statement did not apply to them.

Generation of ideas

Most of the respondents (88%) subscribe to the statement that they have many ideas to renew the education. They make use of multiple sources to generate ideas: the needs of students (91%), the occupational practice (75%), colleagues (66%) or the possibilities of digital tools (63%). Almost all respondents (92%) perceive brainstorming with colleagues as an important activity to generate ideas, and 78% perceive that connecting disciplines is a means to generate ideas.

Adoption of ideas

More than half of the respondents (54%) report to focus on a limited number of ideas to renew the education. They perceive it important that the idea fits the needs of students (96%) and the occupational practice (96%). Furthermore, 70% perceive the importance that the management supports the idea, and 63% check if there is sufficient evidence available for the idea.

Three-quarters of the respondents indicate that the idea should fit their personal areas of interest. For 34% of the respondents it is important that the idea fits their current knowledge and skills. Three-quarters of the respondents want to invest in an idea if it allows them to learn. The opinions seem to differ with regards to the need of having an impact: 48% subscribe to the statement that the idea should have impact, whereas another 39% disagree with this statement.

Implementation of ideas

Most of the respondents (67%) subscribe to the statement that he or she is actively gaining new knowledge regarding didactics or digital possibilities. Another 79% report to actively keeping their specific area of expertise up-to-date. The same percentage of respondents report to actively approaching colleagues and people within their network who possess knowledge they don't have, and 52% actively keep track of developments in the occupational practice.

We see a variety of responses regarding the extent to which they seek additional resources. Thirty-three percent perceive to have sufficient time to develop new things, 38% disagree and 24% have a neutral standpoint. A similar distribution could be seen regarding activities to generate financial resources. Around 33% say they to do this, 25% do not and another 25% have a neutral position regarding this statement. Sixty-five percent subscribe to the statement that they seek buy-in for their ideas and another 25% have a neutral opinion regarding this statement.

Incorporation of ideas

With regards to statements addressing the way ideas are incorporated, a relatively high number of respondents have a neutral opinion. Thirty-seven percent have a neutral opinion regarding the statement if they worked according to a clear planning. Another 43% are neutral regarding the statement to make sure that tasks are assigned among colleagues, and 53% hold a neutral position regarding the statement of securing that innovations were embedded in existing processes and systems.

Experience of new working context

Most of the respondents (75%) subscribe to the statement that their working context helps them to incorporate the required innovation in the study program, and 83% report that the educational innovation contributed to the 'fun at work'. Also, the role of the manager is evaluated positively by 88%. Finally, 91% report to experience sufficient freedom to craft the education according to their own insights.

Type of activity	Number of teachers who mention this activity in the storyboard (N)	Critical moments that could be a barrier for implementing the idea
Creating ambassadors; making others enthusiastic, seeking allies, creating buy-in	12	Not the right momentum to pitch the idea.
Experimenting	8	No support from colleagues with whom the teacher will execute the idea. No shared view on how the program will be executed.
Brainstorming with colleagues	7	
Increasing knowledge by (scientific) literature study and online search engines.	4	No evidence found for idea in (scientific) literature.

Table 1: Activities mentioned in storyboards and the accompanying critical moments

Results story boards

Eighteen of the 31 teachers created a storyboard. Table 1 summarizes the activities derived from the storyboards and the critical moments related to these activities. They reported how they were taking actions to get support for their idea, how they were experimenting to test, improve and make their idea visible, how they involved their colleagues by brainstorming, and how they increased their knowledge relevant for their idea. Specifically, regarding creating buy-in, one respondent gave the following suggestion that one needs to choose the right moment to pitch an idea, although the storyboard was not explicit about what makes a moment the right one: "You have to promote your idea among colleagues at the right moment. I was already working on the idea, while others were focusing on other things". The storyboards show that activities are not necessarily conducted in a specific order, but rather seem to be a more iterative process. In one storyboard, we could read that creating a certain feeling

of pressure seems to contribute to success: "Once we have an idea, for example after a brainstorming session, one has to directly detail the output, sparring with a couple of people, and then make it work (write a report, organize resources, inform the education committee, etc.)". Keeping the energy, and having passion and fun seemed to be important ingredients for the successful implementation of an idea as well.

Preliminary conclusions and discussion

In our research we addressed the question whether the new working context of teachers supported innovation. The organizational structure as described in this case study is characterized by a high degree of autonomy for the teachers who collaborate in multidisciplinary teams, in which the management rewards innovative behaviour and facilitates where possible. Given the fact that this context incorporates a high number of elements that are known to facilitate innovation, the assumption was that teachers would experience that this context was supporting them to innovate. We evaluated whether this was indeed the case in their educational innovation.

Our research shows that in general teachers positively evaluate the new working context. They experience the renewal process to contribute to their job satisfaction and feel supported by the management. A large majority of the teachers, partly as a result of this new working context, do have many ideas to renew the education. Even though they use multiple sources to generate ideas, they are mainly inspired by the needs of students and the occupational practice. Especially by sharing their ideas with others, they enrich their ideas. For the implementation of their ideas they specifically focus on creating buy-in, mentioned in two-thirds of the storyboards, with activities such as seeking allies, communicating the idea to others and 'drinking lots of coffee'. In addition, experiments help to make their ideas more visible.

However, the opinions are less uniform regarding what can be done to make sure that the innovation process does not stop after the experiment has been worked out. It seems that for the incorporation of ideas it is crucial that teachers know how to influence their context. In this regard, teachers differ to the extent by which they influence elements of their working context to make sure that experiments finally will be embedded in the educational practice, such as finding time for development, getting access to financial resources, and aligning with existing processes.

Not all teachers seem to be convinced that they need to play an active role regarding the organization of work processes that are required to realize ideas. Perhaps they might perceive this as less inspiring or not as their area of responsibility. For decades, the alignment of activities and arranging financial resources have primarily been the role of coordinators or managers. For that reason, Kanter (1988) purposely incorporated in

his model different roles that need to be fulfilled if organizations strive to successfully implement their ideas. In the nineties, organizations seemed to be conveniently organized to allow for dedicated coordinating roles. Nowadays, organizations are becoming more complex and require more agility to respond quickly towards new developments. The current view is that every professional can do these coordination activities, eventually supported by digital tools. McKinsey (2017) states that in the near future it is likely that each worker needs to be able to possess these types of management skills. In this view, 'teachers of the future' not only need to be good in the execution of their daily educational activities, but also be able to generate ideas by which they anticipate new developments and be able to implement these ideas. This requires them to continuously broaden their expertise and develop new areas of expertise which can be applied in new contexts. Van der Heijden (1998) coined the term 'flexperts' for those professionals who are highly capable of this flexibility. Frie et al. (submitted) put forward the idea that these flexperts are capable of influencing their context in order to realize their ideas. This enables them to continuously learn. This flexibility strengthens the organization's ability to successfully innovate, contribute to the sustainable employability of professionals as well (De Vos & Van der Heijden, 2017). Anticipating for their sustainable employability is something that students will have to learn. Ideally, all teachers will be capable of this flexibility and thus lead by example. Future research should focus on the question if this is an ability that everybody could learn.

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