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A platform for the influencers: spreading educational innovations via a professional learning network

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Abstract

To further the spread of educational innovation and the sharing of good teaching practices our faculty decided to set up a professional learning network (PLN). With the PLN the aim is to reach an early majority of lecturers by asking influential lecturers to share their practical experiences.

Via the PLN meetings for lecturers are organized, web-based resources are made available and educational support is provided. In meetings lecturers present good practices for their colleagues. The topics of the meetings connect to faculty policy (such as: technology enhanced learning, inclusion of international students).

Analysis of visitors to the meetings shows the target audience has been reached. Visitors are mainly lecturers, associate professors and professors, spread evenly across all departments of the faculty. On the topic of Technology Enhanced Learning, 71% of the visitors to the PLN are outside a group of early adopters. Overall, meeting visitors are found to be innovators, early adoptors and early majority.

In conclusion we found that a PLN can be used as a platform for influencers to reach an early majority of lecturers.

Keywords: diffusion of innovation; technology adoption; staff development; professional learning networks; university education.

1. Introduction

Changes in the higher education landscape forces faculties and it's lecturers to change their approaches to teaching and learning. These changes stem from global developments (globalization, digital transformations) and from advances in research about teaching and learning. As an example, active learning style courses, where students work through a blend of face-to-face and online activities, are proving more effective than a more traditional lecture-and-exam style of course. A meta-analysis (Freeman et. al., 2016) comparing 225 studies under traditional lecturing versus active learning showed examination scores to be 6% higher in active learning courses as compared to traditional lecturing courses. Also, students in traditional lecturing courses were 1.5 times more likely to fail than in courses with active learning. Within the faculty of Economics and Business the need is felt to make this message heard.

Not every lecturer and every class needs the same innovations. Innovations concern not only tools to support active learning but also other topics concerning the faculty's educational policy: inclusion of international students, research driven education, employability, and learning communities. How can we spread these ideas and support implementation by higher education lecturers?

1.1. Reaching the early majority of lecturers

Theory on diffusion of innovation (Rogers, 1962) describes a chasm. This chasm can be seen in Figure 1. Early adopters are eager to take up innovations, but it is hard to move from the early adopters to a the early majority. Moore's work (1999) on crossing this chasm taught us to work the curve from left to right. Each group of lecturers within a faculty has its own characteristics and thus needs a different communication approach to win them over for an innovation. Innovators may see innovation as a way to dramatically change things and are willing to take huge risk to do so. For reaching the early majority, a different, more pragmatic approach is needed. For this group the focus should be on solving practical problems that are proven to work.
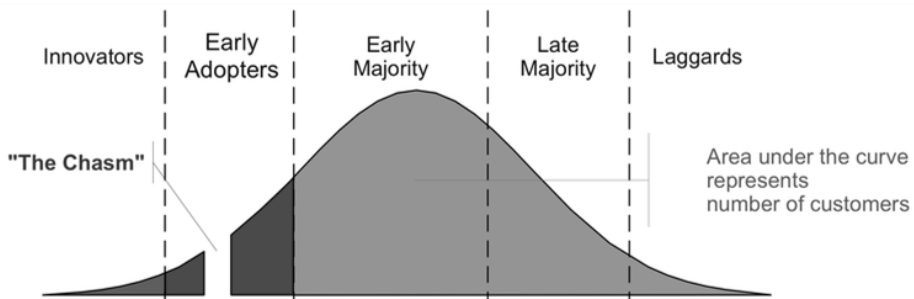

Figure 1. Technology Adoption Lifecycle (Image: Craig Chelius, creative commons, CC-BY-3.0).

1.2. Professional learning networks to spread innovation

In education, professional learning networks (PLN) are seen as promising to work this curve. Early adopters can describe what practical problems were solved for their courses, thereby supporting the early majority. The influencers are lecturers from the group of early adopters who are willing to show how innovations made a practical difference within their courses. Influencers take risks and experiment, the early majority is interested in payoff for their courses in terms of time investment or effectiveness of student learning. Thus for a PLN it makes sense to ask influencers to present and share their experiences in the network.

The characteristics of a PLN (Stoll et. al., 2006) can be used to it's design. The faculty board should support the PLN. Learning in the community should be collective and put in practice. Practices of lecturers are shared, discussed and reflected. To support this and make the PLN sustainable supportive conditions are needed (Smith, 2012), such as recognition of the time needed to make changes to courses, contextualised innovation (thus: practical examples of peer lecturers), supportive networks, and a solid institutional infrastructure.

The model for a PLN should be highly social and informal. A study by Dancy et. al. (2016) on the use and spread of peer instruction shows that social interaction amongst staff is an important communication channel. The PLN should use the power of these informal networks. It is an important lesson to add informal networks to traditionally employed staff training programs such as advocated by Guskey (1984). Besides training sessions, papers and websites informal means should be employed: network building through social activities such as, workplace learning and coaching.

To put this ideas into practice we'd like to know what audience can be reached with a PLN. With reaching the intended audience, can we indeed see that "influencers" help to reach an early majority? Thus, questions for this study are:

- Which population of teaching staff can be reached with a PLN?
- Can a PLN be used to reach the early majority of teaching staff?

2. Design of a PLN: FEBcon

In a memo to the faculty board the plans for the network were outlined. Time slots and a planning for the network were set, with meetings four times a year, plus a social event afterwards. Planning of the meetings was in exam weeks, so the lecturers had no classes to teach. We've set the maximum meeting time to an hour. Speakers were asked to keep it short and focus (what problem did it solve, how did you solve this, what were student responses, what would you recommend to colleagues). Further, we asked for hands-on activities, not just presentations. A steering group was made consisting of two educationalists and the professor of educational innovation of the faculty. This group set the

topics and invited lecturers from their own faculty contacts. Further, a website was set up and promotional videos were made. FEBcon, our PLN, was born.

Figure 2. FEBcon participants in a meeting on design thinking.

As described in literature (Smith, 2012), many of the enabling factors were now in place. Support from the faculty board was achieved. Lecturers were invited who discussed how innovation worked in their course (contextualized innovation). The faculty infrastructure in terms of locations, funding and organization support was used. Recognition of time needed to change practices depends on the particular context of the course (does the time required fit in allotted time for course design?). To help with allotted time, some lecturers were able to take part in faculty or university innovation projects.

3. Study design

To answer the first question we analyzed the characteristics (position, department) of the visitors to the FEBcon meetings. We'd like to see if there is a spread across different positions (lecturer, associate professor, professor) and departments of the faculty. Looking at demographics could give information regarding the effectiveness of the network.

To answer the second research question we selected one educational innovation project from within the faculty, called Technology Enhanced Learning (TEL). The electronic learning environments of courses were looked into for examples of use of TEL. This gave

the list of early adopters, actually using TEL within the faculty. Comparing this list to to the visitors of FEBcon helps to answer the question which audience is reached.

To see whether the PLN reaches the early majority, the group of visitors of FEBcon was scored according to the stages of the adoption life cycle (Figure 1). This was done in a small group of three experts, and based on several data sources.

4. Analysis

4.1. Which population is reached with a PLN?

Three network meetings held so far resulted in a total of 68 unique visitors (out of a total of 467 staff members). Table 1 shows spread over faculty departments.

Table 1. Spread of FEBcon visitors over faculty departments

Department	FEBcon visitors	Department total
Accounting	8	35
Economics, Econometrics and Finance	14	135
Innovation Managent and Strategy	16	41
Global Economics and Management	9	70
HRM and Organisational Behaviour	3	37
Operations	7	65
Accountancy	1	27
Marketing	4	39
Education support (plus trainers)	6	18
Total	**68**	**467**

Figure 3 shows groups of visitors divided over their job function, compared to the number of staff with this function in the overall faculty population.
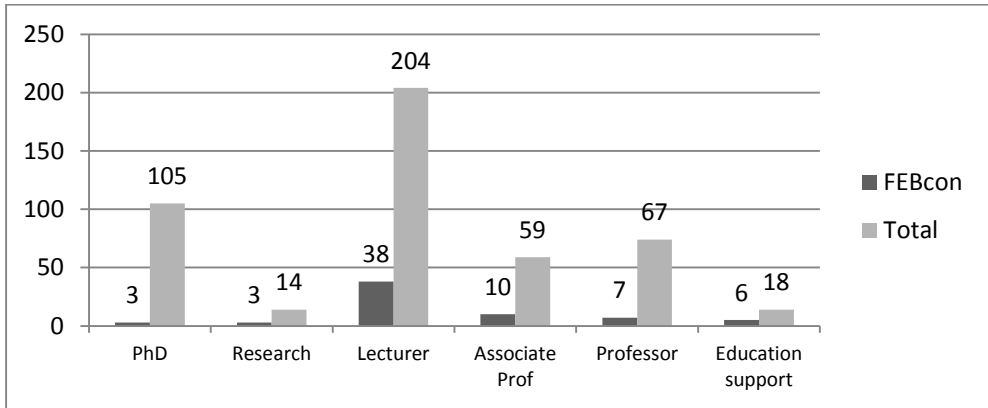
Figure 3. FEBcon visitors related to their function.

To give an overview of courses that employed TEL tools, a total of 229 course environments were studied, with courses running in the first semester of the academic year 2018-2019. Examples of TEL tools used are: weblectures, online annotation, digital books, personalised maths learning, peer feedback, games and simulations. This gave a list of early adopters in the use of TEL tools. In this list all involved lecturers of the course are included, as it is assumed the use of the these tools is discussed with all lecturers in the course. The list was compared to the visitors of FEBcon. Out of the FEBcon visitors, 20 lecturers were on the list of courses using TEL (29%). Thus, 71 % of the visitors to FEBcon are in a group outside of these early adopters.

4.2. Can a PLN be used to reach the early majority?

To answer the second research question, the visitors to FEBcon were analyzed by an expert group and scored along their stage in the adoption cycle. This gave a distribution as shown in Figure 4.
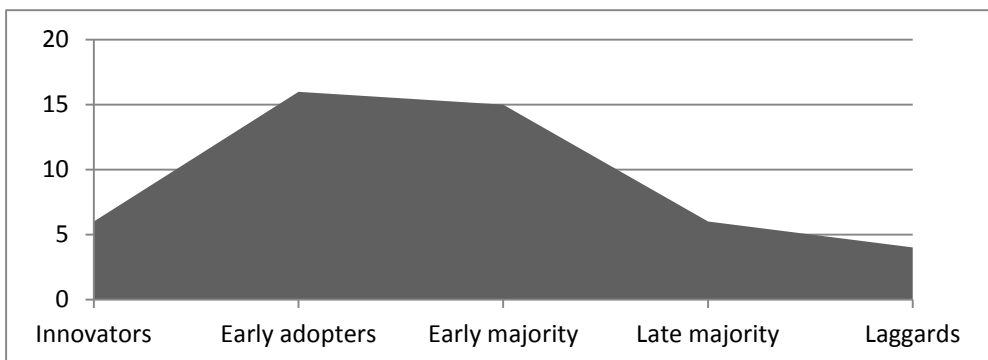

Figure 4. FEBcon visitors characterised according to stages in the technology development cycle.

Figure 4 thus gives an estimate of the composition of groups that were present during the first 3 meetings of FEBcon.

5. Conclusions and discussion

In this study two main questions were asked. We wanted to know which population of teaching staff can be reached with a PLN, and if a PLN can be used to reach an early majority.

First off, to make setting up a PLN work, some premises needed to be in place, a network to promote meetings, faculty contacts to find speakers and current topics, and support from the faculty board. This enabled the design of our PLN (FEBcon).

With three network meetings held and 68 unique visitors the composition of this audience seems to be as intended. Visitors to the network meetings are spread evenly across departments, and a spread is found over lecturers, associate professors and professors. The amount of visiting educational support staff, PhD's and researchers is relatively low, as was intended. So, the potential for social and informal contacts as stressed by Dancy et. al. (2016) is there.

In terms of attendance of these events, there is still a way ahead of us. Reaching 68 out of 467 teaching staff are in absolute terms not high numbers. But, compared to similar staff development events at university level attendance is good. A generic, university level education day attracts about a hundred lecturers, with a maximum of 10 lecturers from our faculty.

Analysis of data shows a network of lecturers has potential to reach an early majority of lecturers. We compared an overview of lecturers who have implemented TEL in their own courses with the FEBcon visitors. This shows that we are reaching most groups of lecturers, not just the early adopters, with 71% of visitors of FEBcon not on the list employing TEL. Our network entails more topics, but we see this as an example of the potential of the network.

Analysis of where the visitors are in the technology adoption cycle gives a slant to the left side of the figure. Relating back to the work of Moore (1999) the approach in our PLN has been most attractive to innovators, early adopters and early majority. This means that in order to reach the early majority we could tailor our approach even more towards this group. It could also be a lesson for staff development meetings elsewhere. If you want to attract early majority: tailor your message to make it practical and use proven examples. Early and late majority of lecturers do not want to take risks and spend time to pilot. Ask lecturers from the early adopters to discuss their own problems and solutions, thus sharing

their lessons learned. These lecturers are the influencers that are likely to draw in the early majority.

So it seems we have reached our intended audience. But what happens next? Alarmingly, a study by Henderson et. al. (2012) amongst 722 US lecturers showed one third of lecturers leaving the innovation process at some point. This sounds like an incredible waste of resources and energy. Possibly, a propagation model for innovations (Froyd et. al., 2017) may turn out more effective than dissemination models. Reaching lecturers is one thing, adaptation, improvement and learning why things work is a second. Propagation is about development of a strong product through engagement with adopters, and understanding of their instructional systems. Further study of where and why lecturers leave the innovation process and how succesfull innovations are propagated is needed. This to ensure that the best use is made of the lecturers' enthusiasm, time and efforts into quality education.

References

Dancy, M., Henderson, C., Turpen, C. (2016). How faculty learn about and implement research-based instructional strategies: The case of Peer Instruction. *Physical Review Physics Education Research, 12*(1), 010110. doi: 10.1103/PhysRevPhysEducRes.12.010110

Froyd, J. E., Henderson, C., Cole, R. S., Friedrichsen, D., Khatri, R. & Stanford, C. (2017). From Dissemination to Propagation: A New Paradigm for Education Developers. *Change: The Magazine of Higher Learning, 49*(4), 35-42. doi: 10.1080/00091383.2017.1357098

Freeman, S., Eddy S. L., McDonough, M., Smith, M.K., Okoroafor, N., Jordt, & H. Wenderoth, M. P. (2014). Active learning increases student performance in science, engineering, and mathematics. *Proceedings of the National Academy of Sciences of the United States of America, 111*(23), 8410-8415. doi: 10.1073/pnas.1319030111

Guskey, T. (1984). Staff Development and the Process of Teacher Change. *Educational Researcher, 15*(5), 5-12. doi: 10.3102/0013189X015005005

Henderson, C., Dancy, M., Niewiadomska-Bugaj, M., *Physical Review Physics Education Research 8*(2), 020104. doi: 10.1103/PhysRevSTPER.8.020104

Moore, G. A. (1999). *Crossing the chasm: Marketing and selling high-tech products to mainstream customers.* New York: HarperBusiness.

Rogers, E. M., (1962). *Diffusion of Innovations.* New York: Free Press of Glencoe.

Smith, K. (2012). Lessons learnt from literature on the diffusion of innovative learning and teaching practices in higher education. *Innovations in Education and Teaching International, 49*(2), 173-182. doi: 10.1080/14703297.2012.677599.

Stoll, L., Bolam, R., McMahon, A., Wallace, M., & Thomas, S. (2006). Professional Learning Communities: A Review of the Literature. *Journal of Educational Change, 7*, 221-258.