Sense-making Process in School Innovation: A Case Study at Vietnam National University, Hanoi – International School

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Abstract: Implementing an innovation at school is never a straightforward process. Rather, the actual execution of changes in any educational institutions from original ideas to practice is a complicated pattern, which may lead to unexpected outcomes. In order to understand such complexity in educational innovation, in this study, the teachers' sense-making process at both individual and organizational levels is used as the main conceptual framework. Drawing on data from semi-structured interviews, this article reports on an exploratory study into the perceptions and implementation of a new online learning system for assisting students' self study in the English Preparatory Program at Vietnam National University, Hanoi – International School (VNU-IS).

Keywords: Innovation, sense-making process, VNU-IS.

1. Introduction

Issues around the actual implementation of education innovation have widely attracted attention from many educational policy-makers scholars and individuals who are concerned with the development of education. Appearing feasible, every educational innovation is expected to have maximal impacts on both students' learning and teachers' professional development [1]. However, as agreed by a number of researchers [2-4], the execution of educational policies is not a simple and straightforward process prescribed by policy makers but is complexly determined by a number of factors generated from individual teachers, organizational context and broader environment. To understand the process of innovation and, thus, explain its possibly conflicting results, it is important to explore how innovation is perceived and actually enacted by the participating people. Therefore, a number of studies have been done around the world to get more insight into the issue of educational innovation diffusion, but few have been reported in the context of Vietnam, especially in the situation that a total transformation of educational system is called for. With regard to this problem, this paper attempts to examine the application process of an online learning system for assisting students' self study in the English Preparatory Program at Vietnam National University, Hanoi – International School (VNU-IS), which is famous for its high quality English instructed programs. The examination and analysis of the case is done based on the following research question:

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- How did teachers' sense-making process impact the application of the new English online learning system at VNU-IS?

As to the study methods, our conceptual framework is based mostly on cultural-individual perspective [4] with the notion of *sense-making*. In terms of data collection, the information was collected through semi-structured interviews with 8 teachers who were responsible for implementing the new online learning system at VNU-IS. The next sessions are constructed as follow: (2) The overview of the English Preparatory Program and the new online learning systems; (3) The conceptual framework; (4) Research method; (5) Results and discussion and (6) Conclusion and recommendation.

2. The English preparatory program at VNU-IS and the need for innovation

VNU-IS is one of the higher educational institutions in Vietnam National University, Hanoi. As a leading institution specializing in international joint training and English language instructed programs, the school has been providing its students with a high quality English preparatory program, or General English (GE) program. The aim of the program is to equip students with sufficient knowledge and skills in English language so that they can accomplish their university study successfully. With the expected outcome to be B2 level (according to Common European Framework of Reference for Languages or CEFR), the program is structured with 5 levels, each of which lasts for approximately 8 weeks (being equal to 160 in-class hours). The teachers of the program are both Vietnamese and foreign ones, and there is one formal teacher in each class to be in charge of all class activities, especially students' progress and their self study.

Having been run for nearly ten years, the GE program at VNU-IS is considered to have high quality thanks to its consistent training structure, updated learning materials and professional teaching staff. The percentage of students who passed the B2 exams often reaches high percentage However, recently, as requested by Vietnam National University Hanoi (VNU), some radical changes have been made in the B2 exam format. Also, competition among various providers of English language training courses is becoming tougher. This situation led to the acknowledgement from the management board of the school that it was vital to improve the effectiveness of GE program to ensure the rate of student enrollment as well as their retention. Therefore, one of the strategies proposed was to adopt an online learning system to assist students' self-study to enhance all of their language skills, and Knowledge Transmission online learning system was chosen for such purpose.

Knowledge Transmission online learning system is an online platform which provides various English language courses of different levels for students of other languages. The platform is used mostly for students' self-study but can be monitored by teachers. It is described to be interactive and user-friendly. All four skills of languages are provided and the virtual classrooms allow teachers and students to communicate both synchronously and asynchronously.

Highly recommended by the management board of VNU-IS, Knowledge Transmission online learning system was introduced to VNU-IS teachers and students in 2016 and it was implemented for several months. Nevertheless, it was obviously seen that the system did not bring about as many positive changes as expected. Therefore, the case needs analyzing carefully.

3. Understanding innovation at school level: Individual and collective sense-making

In order to have a close look on the given case, the author drew her analysis from different theories and studies of educational innovation (or educational reform).

Theoretically, to understand the complicated process of education reform, different analyzing approaches have been proposed. One of the most salient approaches that were widely used by many education scholars is the *sense-making approach*. Generally, this perspective focuses on understanding educational innovation by looking at characteristics of individual teachers and cultural context of the organization where they work [5]. Advocates of this perspective insisted that "the actual innovative practices are influenced – at least equally or even more – by individual and collective sense-making as well as by objective characteristics" [5]. This means there is a complex interaction between individuals and contextual factors within an organization that determines the actual execution of the reform.

Although there are various people who play different roles and have impacts on the ultimate success of educational reforms, it is admitted that the teaching professionals are central ones who primarily mediate the message from policy makers to their classrooms. Also, it is often argued that the process of change taking place in schools is in fact impacted by institutional conditions from broader environment, which includes the interaction between the schools, governmental agencies and non-governmental organizations [6]. However, considering the scope and purpose of the innovation in this case study, the author would argue that teachers' sense making of the new message has the most significant influence on how they actually implement it in their classrooms, and hence, on the results. Therefore, in this study the sense-making approach is adopted as the main conceptual framework. Specifically, the reform execution at the Department of Academic Foundations, where the English Preparatory (GE) Program is offered, is analyzed by looking at individual and collective interpretation among professionals led to the result as such.

3.1. Individual sense-making

At individual level, professionals working in schools often make sense of new messages based on their own *personal interpretive framework* which is defined as "a set of cognitions, of mental representations that operates as a lens through which teachers look at their job, give meaning to it and act in it" [7] The framework not only helps guide teachers in a particular situation but is also modified through interaction with that context. There are two different yet interconnected major domains within the framework: *professional self-understanding* and *subjective educational theory* [7]

Professional self-understanding is understood as teachers' conception of themselves as teachers. This includes the way teachers typify themselves as teachers based on their self-perception and other people's feedback *(self image)*; the way teachers evaluate their job performance to see how well they are doing the job based on the most important people's feedback (*self-esteem*); teacher's idea of their tasks and duties in order to do a good job and do justice to students (*task-perception*); motives or drives that make people choose to become a teacher (*job motivation*) and teacher's expectations about his/her future in the job (*future perspective*).

Subjective educational theory refers to the "personal system of knowledge and beliefs about education that teachers use when performing their job" [7] The application of *subjective educational theory* is expressed through the ability of "reading" a situation based on teachers' informal understandings of the field they teach, which is often derived from their in-service training. It is also shown in the beliefs which are drawn from their different career experience. In the specific case of the study, the knowledge and beliefs refers to English language teaching expertise. With these understandings and beliefs, teachers can have judgment and deliberation of a specific situation and make decision on which approach to go.

In general, there is a close link between *self-understanding* and the *subjective educational theory*, with the former

constructing teachers' personal goals (the 'what?'), and the latter consisting of the knowledge to achieve them (the 'how to?'). [7]

3.2. Collective sense-making

At organizational level, it is believed that the actual implementation of an innovation at school is determined partly by the process called *collective sense-making*. This process is often "based on a more or less explicitly shared set of assumptions, norms, values and cultural artifacts that orient, guide and evaluate teachers' actions" [7] In other words, it can be named as the organizational or school culture. Being a part of the organization, it is important for teachers to have a sense of identity. That is the reason why their perceptions as well as behaviors can be influenced by this. The interactions among staff member, the consensus of their ideas and the sharing culture, for example, can be the indicators of collective sense making, and thus play as another lens through which teachers "read" the situation and react accordingly.

4. Research methods

4.1. Participants

Participants in the study were 8 teachers from the Department of Academic Foundations of VNU-IS. They were all formal teachers of GE classes and in charge of implementing the new online learning system in their class. There is some heterogeneity among this group of teachers in terms of career and seniority.

4.2. Data collection

For understanding the process of sense-making of staff members at the Department of Academic Foundations in the specific context, a qualitative-interpretative research methodology is applied. This method is believed to provide an effective way for interpreting how people behave under certain circumstances. The main instrument used for data collection was a semi-structure interview, which was given to

individual respondents. The set of questions in the interview covered the following topics: (1) general perception on and experience in using ICT (Information and Communication Technology) to assist students' learning, especially students' self learning; (2) experience before and during the implementation of Knowledge Transmission online learning system; (3) self report and analysis on the results of the system; (4) recommendation on the application of ICT in teaching and learning in VNU-IS. All interviews were recorded, transcribed verbatim and coded.

4.3. Data analysis

All interviews were tape-recorded and transcribed including both verbal utterances and non-verbal behavior. The transcription of each interview was divided into text fragments for summarizing general issue and coded by means of descriptive codes, which were derived from the theoretical framework. Transcript fragments with the same codes were grouped and followed by interpretative analysis.

The data analysis included two main steps. First, the interview of each respondent was considered to be a unit of analysis, and this resulted in an individual report of each case. This vertical analysis helped understand the pattern with which each respondent applied during the implementation of the new system. Second, after the vertical analysis is completed, horizontal analysis across all cases was progressed in order to make comparisons between them. The key in this data analysis process was the use of systematic codes in vertical analysis, so that the differences, similarities, patterns and processes in all cases are drawn.

5. Results and discussion

Although data analysis was in both vertical and horizontal directions, in this article, only the horizontal analysis is reported. Specifically, the author focused on how teachers at the

Department of Academic Foundations perceived the application of ICT in their teaching in general and Knowledge Transmission online learning system in particular through the process of sense-making, based on which the results of the implementation of this innovation is explained.

Generally, results from the interviews with 8 teachers who were in charge of implementing Knowledge Transmission showed several interesting facts. Reporting on the current use of Knowledge Transmission, the respondents said that this online learning system was implemented in all of their GE classes but is no longer used at present. The duration of Knowledge Transmission actual execution in each class varies, ranging from approximately one month to more than two months. Basically, three main reasons for the cessation of the system were given by the respondents. First, according to three teachers, they stopped using Knowledge Transmission because the intake ended and students moved from one level to another. They neither continued to teach the same class nor had another account to monitor their assigned class. The second reason reported by other four teachers was that as both teachers and students were in pressure of passing the VSTEP examination, they chose to focus on test preparation by doing other kinds of exercises rather than practicing on the system. For example, a teacher addressed their students' reaction that "*when they hooked to test preparation, things faded away several weeks later*", or "*they focused on doing other kinds of exercises which were more closely related to their exam and end-of-level test rather than general exercises or skills on the system.*" Finally, one teacher perceived that "*the system was to help students to pass the exam so when they passed the exam they finished using it*", and they think "*that is ok when their purpose has already completed.*"

5.1. Individual sense-making process

The implementation of innovation in class depends much on the way teachers make sense of the new message and this is done mainly through their personal interpretative framework. Therefore, the exploration of teachers' perception of ICT in general and of Knowledge Transmission online learning system in particular is the starting point.

Regarding the use of ICT in teaching and learning, all the respondents showed positive attitude about it. Explaining their favor to ICT application in teaching, the respondents referred to their perceived nature of high technology as "*interactive and convenient*" and to the potentiality of helping them do their job better. This perception comes from both of their professional self-understanding and subjective educational theory.

As to professional self-understanding, all teachers reported that before Knowledge Transmission online learning system, they had already used ICT in their teaching. In fact, the application of ICT in teaching made them more confident of the self-image as a "*good teacher*" and increased their level self-esteem because "*my students appreciated my lessons more than the traditional ones*" or "*they would pay more respect to the teachers who do something new in the class*". Moreover, students' favorable attitude strengthened their task perception that ICT enhances better English teaching and learning. All teachers saw that the use of ICT made their lesson more vivid and attractive to students. Some also perceived that lessons integrated with high tech could inspire and motivate their students, giving them feeling of doing very good justice to others. They "*feel more energetic and dedicated*" to what they are doing. Such general positive perception about ICT application played as a lens, based on which teachers made sense of Knowledge Transmission online learning system and tried adopting it in classroom.

Other reasons to adopt ICT in teaching practices suggested the significance of subjective educational theory [7]. It was obvious that the beliefs of the respondents were heavily influenced by their experience in both ICT application and English teaching.

Regarding the use of ICT, the respondents had different experience with it: Some teachers were more active in applying ICT in their teaching. They had exploited online resources and system to assist their teaching in certain sessions such as checking students' writing before, so when Knowledge Transmission was introduced, besides the official training sessions, they "*personally spent some time at home to discover what it was*"; some others use high-tech devices and applications merely for communicating purposes such as assigning homework or getting feedback about learning materials. However, thanks to two official training sessions provided by the school, all teachers could basically understand the operation of the system and believed that it was useful and interesting to their students.

As to English teaching experience at GE program, there was a consensus among all the respondents that their lessons should be interactive and there should be a wide range of activities so that students can have chances to practise all four language skills. They also believed that students' self-study process should be closely monitored and assisted by teachers. In addition, a common perception among teachers was that the main target of their teaching and students' learning was to pass VSTEP examination.

Interestingly, however, when explaining the reasons for not continuing to adopt Knowledge Transmission, the teachers who stopped using it after short time claimed that the activities and exercises offered on the system did not match with the VSTEP test preparation approach, which played as one the main frameworks for their teaching. In one case, the teacher actively stopped using the system as she chose to focus on something else which she considered to be more suitable to her students. In another case, the teacher explained that it was her students' own choice and she thought there was no need to "*force students to do what they don't like*". Also, a teacher claimed that Knowledge Transmission system "*can be quite useful for learners of low levels in English, but for better*

learners, it is not attractive enough. There are many other good programs out there." These teachers who realized the mismatch between the online system and their target in GE program were those who had more experience in ICT application. It seems that they had spent time exploring, using and assessing the effectiveness of the system based on their previous experience of teaching with ICT. Thus, their choice to stop using the system was an active and rational one. In other words, they made sense of the new innovation based mostly one their own subjective educational theory.

On the contrary, some teachers reported that they used the online learning system during the whole intake and only stopped when the students finished the level and moved to another one. These teachers were those whose interviews showed less experience with ICT application and they refer to more objective reasons rather than their own choice.

5.2. Collective sense making process

Not only was ICT reform in VNU-IS impacted by teachers' personal interpretive framework, but other social processes in the school and especially the Department of Academic Foundations also had remarkable influence on the way teacher perceived and executed the innovation.

Answers from the respondents about both formal and informal communication with their colleagues before and during the execution of Knowledge Transmission showed various levels of collegiality. As reported, after the two training sessions organized by the school and guided by the system provider, the teachers were sent a list of accounts to start implementing in their class, and no formal meetings were called for to discuss about the system. Rather, more informal discussion took place among colleagues. This is compatible with suggestion by Coburn (2001) that the actual process of collective sense making happened in more informal contexts than formal meetings. The effectiveness of this sharing

activity, however, was perceived differently. While some respondents admit the positive effectiveness of sharing with their colleagues, other did not see so. For example, in four cases, the teachers reported that they did seek help from colleagues: "*there was a problem with the codes given to students. I shared the problems with them and together we found the solution*", or another teacher said "*we often shared ideas and information….and I shared the information with my colleagues because they could give the result of their classes and we compared*". On the contrary, a teacher claimed "*I had some talk with my colleagues but I may say that it's not really useful because all of us are new users*". Even, one said "*we just do it and we just stop it and say nothing to each other about that. No discussion, you know, no debate, no meeting*". Interestingly, in one case the teacher explained that she had no discussion with her colleagues about the system because "*I'm a master of it. I understand all the rules and if I had any problems, I would contact the IT support team but not other teachers..but I can manage it…I can work with it*".

Hence, it is clear from these responses that the level of collegiality among the staff varies for different reasons. Those who chose to discuss with their colleagues showed positive attitude about the effectiveness of this activity. They were also among teachers who had less experience in ICT application. In contrast, teachers who had limited sharing with others had more experience in ICT and they did not value the roles of their colleagues much during the implementation. In fact, the variety in teachers' interpretation may help explain the result of the implementation. For teachers who had more contact with other colleagues, one of the reasons they stopped using the system was because it was a kind of an unofficial agreement among them as one of them reasoned that "*it's not the only case of my class or my students but it's also the same thing in other classes*". This situation is understandable as Kelchtermans (2006) suggested that positive collegiality does not necessarily lead to benefits. Instead,

because of such firm consensus among the school teachers, little changes are initiated. Meanwhile, those who did not discuss with others stopped the system because of their deliberate choice rather than any influence from their colleagues.

Moreover, apart from the interaction among the professionals, it was repeatedly emphasized by the respondents that one of the most important reasons they started to use the system was because it was the requirement from the school and the department. Therefore, they stopped it because there was no more official requirement, clear policy or strict rules which asked them to continue: "*we just do it in the kind of free….you can do whatever you want about that, no punishment, no reward from school*". Interestingly, while some perceived the lack of rules negatively impacted the implementation of the system, others supposed the system an additional resource for students and "*the only thing we can do and should do is to assist them, not to force them to do what they don't like*". This situation in part reflects the organizational culture in which people seem to base their decision of reaction on more official instructions and hierarchical leadership than unofficial ones.

6. Conclusion and recommendation

In brief, the application of the new online learning system named Knowledge Transmission at VNU-IS disclosed the complicated process of implementation in which the process of sense-making at both individual and collective levels play the central roles. In terms of individual sense making, both self-understanding and subjective educational theory have decisive roles in the way school teachers construct meaning and execute the new message in their classroom [8]. The different levels of self-understanding and subjective educational theory, especially the diverse experience in ICT application led to teachers' various assessment of the effectiveness of the

reform and thus, to their action during the actual implementation. Teachers stopped using the system as both deliberate and undeliberate choices.

Regarding collective sense-making, it is recognized that as there was no formal meetings among the responsible so most discussion among responsible teachers happen in less formal contexts. However, in these sharing activities, high level of collegiality among teachers also made it hard for anyone to initiate a new way of framing the message. Because of the lack of necessary conflicts, most of real meaning construction occurred at individual level, resulting in various adoption of the new policy [9].

The reform seemed quite "deviated" from its original objective. Therefore, in this final remark, we would like to recommend some improvement. First, it is necessary to encourage school teachers to learn more about the potential impacts of the innovation, specifically ICT application, in teaching and learning by taking part in professional training courses as well as observing model ICT-based lessons. Secondly, it is also very important to assess the innovation well before making decision on it to make sure that it matches with teachers and students' goals. In this way, teachers' beliefs and understandings are enhanced, so that they will be more active to utilize the opportunity to change. Thirdly, in order to enhance necessary collective changes in teaching practice across all professional staff, more effort should be spent setting up favorable contexts for qualified collaboration and collegiality; meanwhile, individual autonomy is ensured. In such contexts, the school leaders should also allow and even support certain conflicts to occur, so that substantial changes may emerge. Finally, in

order for an innovation to be well implemented, it is crucial that the school set up clear requirements with sanctions and incentives, so that all involving people in the innovation understand their roles and understand the need of change for better outcomes.

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APPENDIX

Interview transcript 1

1. **Have you used any kind of ICT (Information Communication Technology) to assist students learning? Why**?

Yes, I used viber on Smart phone to communicate with students, answer their questions related to my lectures in class

2. **Do you think ICT can help us monitor students' self-learning? How?**

Yes, we can communicate with students simply via our smart phones. Some softwares like Knowledge Transmission can enable us to check students' process of doing homework

3. **Why did you use Knowledge Transmission (KT)? How did you think it helps you and your students?**

KT is a very useful software for both teachers and students. It helps my students improve their language knowledge, provides more opportunities to practice at home, to communicate with teachers and friends even without face-to-face communication. For teachers, KT is a great teaching source with a plenty of well-designed exercises.

4. **What activities did you do before implementing KT? Do you think they are helpful?**

Well, I equipped myself and my students with enough knowledge about KT and I also required students to acquire basic computer skills

5. **How did you implement KT?**

I modelled for students in classroom, assigned as weekly homework for students
checked every week

6. **Why did you stop using KT?**

Because I taught another group, so I was not in charge of the group that worked with me in KT

7. **What can be done to implement a better ICT program to assist students' learning?**

Such program needs to be consistent, I mean, in our case, we could only implemented it haft way
I think ICT should be an obligatory subject for students, like IT so that teachers and students can use it seriously and effectively

Interview transcript 2

1. **Have you used any kind of ICT (Information Communication Technology) to assist students learning? Why**?

I guess yes and it was KT that the school…..

Yes, frequently, in some college subjects we use powerpoint most of the time and

I think it's helpful in drawing students' attention to the lessons and makes the lessons more lively.

2. **Do you think ICT can help us monitor students' self-learning? How?**

Definitely because in the class we have only 50 mins per session so at home it's highly required for the students' to use ICT to explore further information on the Internet to support their study in

class. They have to search and find wide range of information to support what the teachers have introduced them.

As you know for the lesson plans we have to exploit many things form the Internet. Especially, just with click to Google we can find a lot of things they are relevant and supportive to what we intend to do in class.

3. Why did you use Knowledge Transmission (KT)? How did you think it helps you and your students?

Firstly it's just the requirement from the school but after applying it in my class I found that students' can find a lot of interesting things to learn and to use. Especially, there are a wide range of levels so that the students' can choose the best one for them

4. What activities did you do before implementing KT? Do you think they are helpful?

When I was studying at higher education there was subject about ICT but honestly, I didn't learn it much and I don't remember it much.

One training session and it's helpful because from the beginning we didn't know how to log in the website but after training everything was clear, we know how to use it, how to exploit it in the best way.

5. How did you implement KT?

I gave them some steps, I mean the procedure, how they can log in, how they can choose the suitable course for them, how can they find the homework that the teacher assigns every week

And then they did it themselves.

Whenever I assign the homework there is the deadline and when the deadline comes I will check their homework, gave them comment and even marks.

6. Why did you stop using KT?

One very important reason is that in GE program after a term we move to another class. So if you want to carry out this procedure we have to start all over again because we have new students. It takes a lot of time and effort for the teachers and students' as well

Also, I haven't got time. Mostly it is the requirement from the school because now we are no longer required to use it so I guess no

I myself must admit that it is very useful but because there's no requirement so I think there's no need to further carry on

7. What can be done to implement a better ICT program to assist students' learning?

I think the most important one is that the ICT should be suitable to students'' needs.

For example, we have to verify the content and the level of difficulty to suit students'' levels and then

An other important one is we have to strictly control what students' are doing on the program because sometimes the teachers are busy with their own business and have no time to check feedback

students' may see that there's no use to carry on if it's not cared by the teachers

I myself also think ICT means everything is available to ss. There should be a kind of innovation like the communicative activities, not just logging in and do some exercises and that's all. It will be much better if we have communicative activities. Most of the time we just do the exercises, practice and drill, so lack of interaction, lack of communication.