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FEW NEW PERSPECTIVES ON TEACHING

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Abstract: *Teachers, for many years, have used a wide variety of teaching approaches but in particular, the way was „learning by listening”. Now we need to examine which are the new perspectives of teaching, appropriate in today’s society. Could be "Interactive lectures, seminars, and tutorials: learning by talking"? or "Apprenticeship: learning by doing"? or "Experiential learning: learning by acting"? or "The nurturing and social reform models of teaching: learning by feeling"? We will see into the present paper some ideas about each of them.*

Key words: *Learning by listening, learning by talking, learning by doing, learning by acting, learning by feeling.*

Argument

Along time, teachers in their learning activities had mixed and matched different teaching methods, depending on the needs of both the subject matter and the needs of their students at a particular time, which, we can recognize that happen also in nowadays.

In the mean time we are convinced that no single method is likely to meet all the requirements of the teachers in this global and digital era. Some forms of teaching fit better with the development of the skills needed now and probably in the near future. Because the combination of conceptual, practical, personal and social skills in highly complex situations is a requirement for the future employees, influences the teachers to combine a variety of teaching methods for realizing this.

Knowing that the new information and communication technologies are nearly of all teaching methods which they can be used in classrooms or online, what matters, from the learning perspective, is not so much the choice of technology as the efficacy and expertise in appropriately choosing but on using it and integrating it in the teaching methods.

New technologies offer new possibilities for teaching, including offering more practice or time on task, reaching out to new target groups, and increasing the productivity of both teachers and the system as a whole.

These were a few reasons for that we stopped to do some comparisons and to point out some conclusions from a comparative review of different approaches to teaching who induces *learning by listening*, *learning by talking*, *learning by doing*, *learning by acting* and *learning by feeling* as Tony Bates [1] noted.

Learning by listening

We can agree that one of the most traditional forms of classroom teaching is the lecture, a transmissivity way of learning. For be clear in this approach we can take in consideration lectures' Bligh definition: „lectures are more or less continuous expositions by a speaker who wants the audience to learn something.” [2] That is important as it excludes contexts where a lecture is deliberately designed to be interrupted by questions or discussion between teachers and students (interactive lecturing).

Lectures themselves belong to a longer oral tradition of learning, where knowledge is passed on by word of mouth from one generation to the next. In such contexts, accuracy and authority (or power in controlling access to knowledge) are critical for „accepted” knowledge to be successfully transmitted. Thus accurate memory, repetition and a reference to authoritative sources become exceedingly important in terms of validating the information transmitted. What is striking is how similar the whole context is to lectures today, with students taking notes, some talking at the back, and one clearly asleep.

What is remarkable is that even after the invention of the printing press, radio, television, and the Internet, the transmissive lecture, characterised by the authoritative teacher talking to a group of students, still remains the dominant methodology for teaching in many institutions, even in a digital age, where information is available at a click of a button. It could be argued that anything that has lasted this long must have something going for it. On the other hand, we need to question whether the transmissive lecture is still the most appropriate means of teaching, given all the changes that have taken place in recent years, and in particular given the kinds of knowledge and skills needed in a digital age.

The most authoritative analysis of the research on the effectiveness of lectures remains Bligh's (2000). He summarized a wide range of meta-analyses and studies of the effectiveness of lectures compared with other teaching methods and found consistent results:

- the lecture is as effective as other methods for transmitting information (the corollary of course is that other methods – such as video,

reading, independent study, or Wikipedia – are just as effective as lecturing for transmitting information);

- most lectures are not as effective as discussion for promoting thought;
- lectures are generally ineffective for changing attitudes or values or for inspiring interest in a subject;
- lectures are relatively ineffective for teaching behavioural skills.

Bligh also examined research on student attention, on memorizing, and on motivation, and concluded (p.56): „*We see evidence... once again to suppose that lectures should not be longer than twenty to thirty minutes – at least without techniques to vary stimulation.*” These research studies have shown that in order to understand, analyze, apply, and commit information to long-term memory, the learner must actively engage with the material. In order for a lecture to be effective, it must include activities that compel the student to mentally manipulate the information. Many lecturers of course do this, by stopping and asking for comments or questions throughout the lecture – but many do not. Teaching in many educational institutions is still organized around a standard 50 minute lecture session or longer, with, if students are lucky, a few minutes at the end for questions or discussion.

There are two important conclusions from the research:

- ✓ even for the sole purpose for which lectures may be effective – the transmission of information – the 50 minute lecture needs to be well organized, with frequent opportunities for student questions and discussion;
- ✓ for all other important learning activities, such as developing critical thinking, deep understanding, and application of knowledge – the kind of skills needed in a digital age – lectures are ineffective. Other forms of teaching and learning – such as opportunities for discussion and student activities – are necessary.

Lectures though still have their uses. McKeachie and Svinicki [3] believe that lecturing is best used for:

- providing up-to-date material that can't be found in one source;
- summarizing material found in a variety of sources;
- adapting material to the interests of a particular group;
- initially helping students discover key concepts, principles or ideas;
- modelling expert thinking. (2000, p. 58)

The last point is important. Faculty often argue that the real value of a lecture is to provide a model for students of how the faculty member, as an expert, approaches a topic or problem. Thus the important point of the lecture is not the transmission of content (facts, principles, ideas), which the students could get from just reading, but an expert way of thinking about the topic.

There are a few occasions when lectures work very well. But in a digital age they should not be the default model for regular teaching. Lectures will

provide a chance for teachers to make themselves known, to impart their interests and enthusiasm, and to motivate learners, but this will be just one, relatively small, but important component of a much broader learning experience for students.

Learning by talking

Socrates used dialogue and questioning „to help others recognize on their own what is real, true, and good.” (Stanford Encyclopedia of Philosophy). This, we can translate now, an example of good practice in learning by talking. In nowadays learning by talking means somewhat interactive courses, seminars, tutorials, general speaking, interactive learning activities, in the approach face-to-face (physically or virtually).

This type of learning suggests the need for frequent interaction between students, and between teacher and students, for the kinds of learning needed in a digital age. This interaction usually takes the form of semi-structured discussion and can be done into the seminars or tutorials activities. They are probably best used when students have done individual work before the seminar. Seminars are flexible enough to be offered in class or online, depending on the needs of the students. Need they a deep learning or a surface learning?

Researchers like Marton and Saljö [4], who have conducted a number of studies that examined how university students actually go about their learning, make the distinction between deep and surface approaches to learning. Students who adopt a deep approach to learning tend to have a prior intrinsic interest in the subject. Their motivation is to learn because they want to know more about a topic. Students with a surface approach to learning are more instrumental. Their interest is primarily driven by the need to get a pass grade or qualification.

From Laurillard [5] and Harasim [6] surface approaches to learning are more commonly found when there is a focus on:

- information transmission,
- tests that rely mainly on memory,
- a lack of interaction and discussion.

and deeper approaches to learning are found when there is a focus on:

- ❖ analytical or critical thinking or problem-solving,
- ❖ in-class discussion,
- ❖ assessment based on analysis, synthesis, comparison and evaluation.

Academic knowledge requires students to move constantly from the concrete to the abstract and back again, and to build or construct knowledge based on academic criteria such as logic, evidence and argument. This in turn requires a strong teacher presence within a dialectical environment, in which argument and discussion within the rules and criteria of the subject discipline are encouraged and developed by the professor.

Constructivists believe that knowledge is mainly acquired through social processes which are necessary to move students beyond surface learning to deeper levels of understanding. Thus it can be seen that seminars and tutorials reflect a strongly constructivist approach to learning and teaching.

Connectivist approaches to learning also place heavy emphasis on networking learners, with all participants learning through interaction and discussion between each other, driven both by their individual interests and the extent to which these interests connect to the interests of other participants. The very large numbers participating means that there is a high probability of converging interests for all participants, although those interests may vary considerably over the whole group.

The combination of theory and research here suggests the need for frequent interaction between students, and between teacher and students, for the kinds of learning (constructivist or/and connectivist) needed in a digital age and for sure, of upmost importance is the ability of teachers to teach successfully in this manner, which requires different skills from transmissive lecturing.

Learning by doing

Learning by doing is particularly common in teaching motor skills, such as learning to ride a bike or play a sport, but examples can also be found in higher education, such as teaching practice, medical internships, and laboratory studies. Learning by doing is one of Pratt's five teaching approaches. Bloom and his colleagues designated psycho-motor skills as the third domain of learning back in 1956.

In fact, there are several different approaches or terms within this broad heading, such as experiential learning, cooperative learning, adventure learning and apprenticeship.

Apprenticeship is a particular way of enabling students to learn by doing. However, apprenticeship is the most common method used to train post-secondary education teachers in teaching (at least implicitly), so there is a wide range of applications for an apprenticeship approach to teaching. Therefore a form of apprenticeship is often implicit, default model also for university teaching, and in particular for pre-service training of university teachers.

Schön (1983) argues that apprenticeship operates in „*situations of practice that...are frequently ill-defined and problematic, and characterized by vagueness, uncertainty and disorder*“ [7]. Learning in apprenticeship is not just about learning to do (active learning), but also requires an understanding of the contexts in which the learning will be applied. In addition there is a social and cultural element to the learning, understanding and embedding the accepted practices, customs and values of experts in the field.

An intellectual or cognitive apprenticeship model is somewhat different because this form of learning is less easily observable than learning motor or

manual skills. Pratt and Johnson [8] argue that in this context, teacher and learner must say what they are thinking during applications of knowledge and skills, and must make explicit the context in which the knowledge is being developed, because context is so critical to the way knowledge is developed and applied. They argue that for cognitive apprenticeship it is important to create a forum or set of opportunities for: *„articulate discussion and authentic participation in the realities of practice from within the practice, not from just one single point of view. Only from such active involvement, and layered and cumulative experience does the novice move towards mastery.”*

The main challenge of the apprenticeship model in a university setting is that it is not usually applied in a systematic matter. The hope that young or new university teachers will have automatically learned how to teach just by observing their own professors teach leaves far too much to chance.

The apprenticeship model of teaching can work in both face-to-face and online contexts, but if there is an online component, it usually works best in a hybrid format. One reason why some institutions are moving more material online in apprenticeship programs is because the cognitive learning element in many trades and professions has rapidly increased, as trades have required more academic learning, such as increased ability in mathematics, electronics, etc. This „academic” component of apprenticeship can usually be handled just as well online, and enables apprentices to study this component when they are not working, thus saving employers’ time as well.

The main advantages of an apprenticeship model of teaching can be summarised as follows:

- ✓ teaching and learning are deeply embedded within complex and highly variable contexts, allowing rapid adaptation to real-world conditions;
- ✓ it makes efficient use of the time of experts, who can integrate teaching within their regular work routine;
- ✓ it provides learners with clear models or goals to aspire to;
- ✓ it acculturates learners to the values and norms of the trade or profession.

But there are some serious limitations with an apprenticeship approach, particularly in preparing for university teaching:

- much of a master’s knowledge is tacit, partly because their expertise is built slowly through a very wide range of activities;
- experts often have difficulty in expressing consciously or verbally the schema and „deep” knowledge that they have built up and taken almost for granted, leaving the learner often to have to guess or approximate what is required of them to become experts themselves;
- experts often rely solely on modelling with the hope that learners will pick up the knowledge and skills from just watching the expert in action, and

don't follow through on the other stages that make an apprenticeship model more likely to succeed;

- there is clearly a limited number of learners that one expert can manage, given that the experts themselves are fully engaged in applying their expertise in often demanding work conditions which may leave little time for paying attention to the needs of novice learners in the trade or profession;

- in trades or occupations undergoing rapid change in the workplace, the apprenticeship model can slow adaptation or change in working methods, because of the prevalence of traditional values and norms being passed down by the „master” that may no longer be as relevant in the new conditions facing workers. This limitation of the apprenticeship model can be clearly seen in the post-secondary education sector, where traditional values and norms around teaching are increasingly in conflict with external forces such as new technology and the massification of higher education.

Nevertheless, the apprenticeship model, when applied thoroughly and systematically, is a very useful model for teaching in highly complex, real-world contexts.

Learning by acting

This kind of learning in fact is another learning by doing but, we can say from experiential learning point of view and we can use the term „experiential learning” as a broad umbrella term to cover all the variety of approaches to learning by doing.

Experiential learning is *“the strategic, active engagement of students in opportunities to learn through doing, and reflection on those activities, which empowers them to apply their theoretical knowledge to practical endeavours in a multitude of settings inside and outside of the classroom.”* („Simon Fraser” University – Canada)

Experiential learning focuses on learners reflecting on their experience of doing something, so as to gain conceptual insight as well as practical expertise. Kolb's experiential learning model [9] suggest four stages in this process:

- ✚ active experimentation;
- ✚ concrete experience;
- ✚ reflective observation;
- ✚ abstract conceptualization.

For accomplish these there are a wide range of design models that aim to embed learning within real world contexts, including:

- *laboratory, workshop or studio work;*

An important pedagogical value of laboratory classes is that they enable students to move from the concrete (observing phenomena) to the abstract

(understanding the principles or theories that are derived from the observation of phenomena). Another is that the laboratory introduces students to a critical cultural aspect of science and engineering, that all ideas need to be tested in a rigorous and particular manner for them to be considered „true”. Labs, workshops and studios serve a number of important functions or goals, which include:

- to give students hands-on experience in choosing and using common scientific, engineering or trades equipment appropriately;
- to develop motor skills in using scientific, engineering or industrial tools or creative media;
- to give students an understanding of the advantages and limitations of laboratory experiments;
- to enable students to see science, engineering or trade work „in action”;
- to enable students to test hypotheses or to see how well concepts, theories, procedures actually work when tested under laboratory conditions;
- to teach students how to design and/or conduct experiments;
- to enable students to design and create objects or equipment in different physical media.

Today, laboratory classes are an essential part of teaching science and engineering. Workshops and studios are considered critical for many forms of trades training, teacher training or the development of creative arts

- *problem-based learning (PBL)*;

Usually PBL follows a strongly systematised approach to solving problems, although the detailed steps and sequence tend to vary to some extent, depending on the subject domain. The following is a typical example: traditionally, the first five steps would be done in a small face-to-face class tutorial of 20-25 students, with the sixth step requiring either individual or small group (four or five students) private study, with the seventh step being accomplished in a full group meeting with the tutor. However, this approach also lends itself to blended learning in particular, where the research solution is done mainly online, although some teachers have managed the whole process online, using a combination of synchronous web conferencing and asynchronous online discussion. The steps of PBL [10] can be shown as follow: 1. Clarify concepts; 2. Define problem; 3. Discuss/analyse problem; 4. Identify possible explanations/solutions; 5. Set task/learning objectives; 6. Research solution; 7. Synthesise solutions/results/reflect. However researchers [11] has found that problem-based learning is better for long-term retention of material and developing „replicable” skills, as well as for improving students’ attitudes towards learning.

- *case-based learning*;

Case-based learning is considered a variation of PBL, while others see it as a design model in its own right. With case-based teaching, students develop skills in analytical thinking and reflective judgment by reading and discussing complex, real-life scenarios. Herreid [12] provides eleven basic rules for case-based learning: 1. Tells a story. 2. Focuses on an interest-arousing issue. 3. Set in the past five years. 4. Creates empathy with the central characters. 5. Includes direct quotations from the characters. 6. Relevant to the reader. 7. Must have pedagogic utility. 8. Conflict provoking. 9. Decision forcing. 10. Has generality. 11. Is short. Case-based learning can be particularly valuable for dealing with complex, interdisciplinary topics or issues which have no obvious 'right or wrong' solutions, or where learners need to evaluate and decide on competing, alternative explanations. Case-based learning can also work well in both blended and fully online environments.

- *project-based learning;*

Project-based learning is similar to case-based learning, but tends to be longer and broader in scope, and with even more student autonomy/responsibility in the sense of choosing sub-topics, organising their work, and deciding on what methods to use to conduct the project. Projects are usually based around real world problems, which give students a sense of responsibility and ownership in their learning activities. Larmer and Mergendoller [13] argue that every good project should meet two criteria: a) students must perceive the work as personally meaningful, as a task that matters and that they want to do well; b) a meaningful project fulfills an educational purpose.

- *inquiry-based learning;*

In inquiry-based learning, the learner explores a theme and chooses a topic for research, develops a plan of research and comes to conclusions, although a teacher is usually available to provide help and guidance when needed.

Banchi and Bell [14] suggest that there are different levels of inquiry, and students need to begin at the first level and work through the other levels to get to „true” or „open” inquiry as follows: 1. Confirmation inquiry – reinforce prior knowledge; 2. Structured inquiry –students follows set process; 3. Guided inquiry – research question only provided; 4. Open/true inquiry – students does everything

There is evidence that experiential learning, when properly designed, is highly engaging for students and leads to better long-term memory. Proponents also claim that it leads to deeper understanding, and develops skills for a digital age such as problem-solving, critical thinking, improved communications skills, and knowledge management. In particular, it enables learners to manage better highly

complex situations that cross disciplinary boundaries, and subject domains where the boundaries of knowledge are difficult to manage. Critics though such as Kirschner, Sweller and Clark [15] argue that instruction in experiential learning is often „unguided”, and pointed to several „meta-analyses” of the effectiveness of problem-based learning that indicated no difference in problem-solving abilities, lower basic science exam scores, longer study hours for PBL students, and that PBL is more costly. In conclusion the use of experiential learning for developing the knowledge and skills needed in a digital age, but as always, it needs to be done well, following best practices associated with the design models.

Learning by feeling

Learning by feeling is the result of the nurturing and social reform models of teaching. A nurturing perspective on teaching can best be understood in terms of the role of a parent. *„We expect „successful” parents to understand and empathize with their child; and that they will provide kind, compassionate, and loving guidance through content areas of utmost difficulty...The nurturing educator works with other issues...in different contexts and different age groups, but the underlying attributes and concerns remain the same. Learners’ efficacy and self-esteem issues become the ultimate criteria against which learning success is measured, rather than performance-related mastery of a content body.”* (Pratt, 1998).

By the other hand, there is a strong emphasis on the teacher focusing on the interests of the learner, on empathizing with how the learner approaches learning, of listening carefully to what the learner is saying and thinking when learning, and providing appropriate, supportive responses in the form of *„consensual validation of experience”*. This perspective is driven partly by the observation that people learn autonomously from a very early age, so the trick is to create an environment for the learner that encourages rather than inhibits their ‘natural’ tendency to learn, and directs it into appropriate learning tasks, decided by an analysis of the learner’s needs.

„Teachers holding a social reform perspective are most interested in creating a better society and view their teaching as contributing to that end. Their perspective is unique in that it is based upon an explicitly stated ideal or set of principles linked to a vision of a better social order. Social reformers do not teach in one single way, nor do they hold distinctive views about knowledge in general...these factors all depend on the particular ideal that inspires their actions.” Pratt (1998, p. 173)

This then in some ways is less a theory of teaching as an epistemological position, that society needs change, and the social reformer knows how to bring about this change.

The two perspectives on teaching nurturing and social reform have a long history, with echoes of:

❖ Jean-Jacques Rousseau (1762): *„education should be carried out, so far as possible, in harmony with the development of the child’s natural capacities by a process of apparently autonomous discovery”* (Stanford Encyclopedia of Philosophy)

❖ Ivan Illich (1971): *„The current search for new educational funnels must be reversed into the search for their institutional inverse: educational webs which heighten the opportunity for each one to transform each moment of his living into one of learning, sharing, and caring.”*[16]

❖ Malcolm Knowles (1984): *„As a person matures his self concept moves from one of being a dependent personality toward one of being a self-directed human being.”* [17]

❖ Paulo Freire (2004): *„education makes sense because women and men learn that through learning they can make and remake themselves, because women and men are able to take responsibility for themselves as beings capable of knowing - of knowing that they know and knowing that they don’t.”* [18,19]

The reason why the nurturing and social reform perspectives on teaching are important is because they reflect many of the assumptions or beliefs around connectivism. Indeed, Illich made this remarkable statement for the use of advanced technology to support “learning webs”: *„The operation of a peer-matching network would be simple. The user would identify himself by name and address and describe the activity for which he sought a peer. A computer would send him back the names and addresses of all those who had inserted the same description. It is amazing that such a simple utility has never been used on a broad scale for publicly valued activity.”* [16]

Well, those conditions certainly exist today. Learners do not necessarily need to go through institutional gateways to access information or knowledge, which is increasing available and accessible through the Internet. MOOCs help to identify those common interests and connectivist MOOCs in particular aim to provide the networks of common interests and the environment for self-directed learning. The digital age provides the technology infrastructure and support needed for this kind of learning.

There are aspects of both perspectives – nurturing and social reform – that have significance for a digital age:

- both nurturing and social reform perspectives seems to work well for many adults in particular, and the nurturing approach also works well for younger children;

- nurturing is an approach that has been adopted as much in advanced corporate training in companies (such as Google) as in informal adult education;
- connectivist MOOCs strongly reflect both the nurturing approach and the ability to create webs of connections that enable the development of self-efficacy and attempts at social reform;
- both perspectives seem to be effective when learners are already fairly well educated and already have good prior knowledge and conceptual development;
- perspectives that focus on the needs of individuals rather than institutions or state bureaucracies can liberate thinking and learning and thus make the difference between „good” and „excellent” in creative thinking, problem-solving, and application of knowledge in complex and variable contexts.

and, we can say, that belongs to the learning by feeling

Conclusions

Going through all these five types of learning- *learning by listening, learning by talking, learning by doing, learning by acting, learning by feeling* - we realized the importance of the theme for any educator, that's why we made this foray.

In our presentation we have tried to summarize what is now revealed to the type of learning, described in brief. Obviously there are plenty of other resources able to coagulate views on these types of learning but we thought it was a good start.

If we managed to awaken the interest is better for personal and professional development of every reader.

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