## SOCIAL SCIENCES & HUMANITIES

# The Relevance of Traditional Personal Teaching Theories in a Technological Advanced Educational Environment

**Johannes A. Wiid\*, Michael C. Cant and Monique Du Bruyn**

*Department of Marketing and Retail Management, University of South Africa, Preller Street, Muckleneuk Ridge, Pretoria 0003, South Africa*

## ABSTRACT

As technology develops and students are being exposed to it from the day they are born, it necessitates a change in the way they receive tuition. This study explores the relevance of traditional personal teaching theories in a technologically advanced educational environment. Self-completion questionnaires were issued to lecturers, ranging from junior lecturers to senior professors, of a leading South African university in order to determine their teaching philosophy and theory. Four basic theories of teaching (transfer, shaping, traveling, and growing) were unpacked and elements thereof were included in the questionnaires. It is clear from the study that critical thinking is the preferred teaching theory of lecturers. It is recommended that uniform approaches to teaching be adopted by lecturers in order to improve students' learning and success.

*Keywords:* ODL practitioners, open distance learning, teaching, teaching philosophies, teaching theory

## INTRODUCTION

In an effort to unify the concept of teaching and learning, various studies have been conducted in the field of teaching practice, teaching theory, and teaching philosophy. These theories have been developed and studied over decades and essentially form the backbone of teaching practice as it is known today. During the conception of any learning activity, there will be decisions

made regarding content, techniques, instructional design, time and place, the sequence of events, as well as assessment criteria. These decisions represent the teaching theory employed by lecturers even if they are unaware that these are established classifiable teaching principles and concepts. The learning theory of students however has had an impact on the teaching theories of lecturers, as lecturers now have to adapt to the needs of students in order to be consistent with the students' learning theories that have been influenced by changes in technology. Therefore, with the rapid change in technology, and the changing needs of students in terms of learning, it is logical to assume that there is a need for change in the teaching approaches of lecturers. This is however a complex task as there is a wide range of mediums that students are exposed to like internet tools, computer simulations, and computer-mediated communication (Proserpio & Gioia, 2007).

With the changing nature of the profile and composition of students, their preferences for entertainment and relaxation activities shifted from watching television or reading to spending a lot more time on the internet. For lecturers, this means that student learning now needs to include virtual teaching components (Proserpio & Gioia, 2007).

Initially, emails were used, and then electronic learning platforms started appearing, first only as repositories of teaching materials, and then as more and more sophisticated interactive platforms

for coursework submission and online feedback, with discussion forums for student workgroups, and options to build in any type of multimedia materials. Today many universities have moved on to webinars, MOOCs, entire courses taught online, and the magic word of 'blended learning' has appeared across the educational landscape as the 'must-have' teaching approach in modern higher education. Academics tend to start using those tools and technologies because they are available and being used by other educational institutions, but often little thought is given to the fundamentals of good university teaching. The first question that can be asked is, is there a real need to improve teaching methods, and if yes, at which level of university education, for which students and most importantly, why? Secondly, what are the goals we have set for our teaching method, and what results are we trying to achieve? Once these questions have been asked we should ask ourselves whether using digital tools might help lecturers in achieving these goals, and if yes, which digital tools would be the most appropriate to use. What tends to get lost in the process is that the most sensible and adequate answer to the third question might be an unequivocal 'no'. Depending on the goals we try to achieve, 'old-fashioned' face-to-face teaching in small groups might be the best approach, and the influence and benefit of digital support might be negligible (Moser, 2016). This view may prove to be short-sighted and costly in the long run.

With the continuous advancement of technology and increasing access to the

internet and information, it is inevitable that technology deserves a significant presence in the landscape of education and more so in an ODL environment where teaching and learning take place within an online platform. The questions begging to be asked include: What are the current teaching practices of ODL practitioners? How do ODL students engage with teaching? Is there a disconnect between these two concepts?

## The Changing Nature of Education

With the advent of the "Digital Natives" generation, there has been a call for change in the application of teaching theories in education. This digital generation is characterized by their exposure to technology from the start of their lives and is assumed to hold knowledge and skills that allow them to handle technologies in a "natural" way (Šorgo et al., 2017). Students that are of the "Digital Native generation prefer multitasking, and have a low tolerance for lectures, prefer active over passive learning and rely on information available through technology" (Ghaith, 2010). This characteristic of the native generation necessitates that the teaching theory of the lecturer is customized to fit the learning theory of the student. The learning theory of a student refers to a student's default manner of obtaining and retaining knowledge, attitudes, or skills during the process of learning (Ackerman & Hu, 2011).

It is thus imperative that lecturers adapt to this changing nature of student learning by adopting the appropriate skills in a technology-enhanced learning atmosphere.

However, there has been some criticism that the changing student learning theories are described in hyperbole and that it is not necessary to make a dramatic change to the teaching environment (Ghaith, 2010). This may be attributed to the disproportionate usage of the technology and the lack of the necessary skills by some students due to widely differing socio-economic backgrounds, ethnic/cultural backgrounds, qualification specializations accessibility to the various technology platforms, and gender.

Despite the disproportionate usage of technology, lecturers still need to ensure that they acquire the relevant skills that are a prerequisite for fully optimizing the constant changes in technology. Another view suggests that in order to keep up with the student learning theories, lecturers are recommended to constantly incorporate the latest technology in teaching (Proserpio & Gioia, 2007). Technology tools that could be incorporated into teaching may include the internet and computer simulation. The internet provides the opportunity to access news and information in various formats. The internet also provides the opportunity to communicate with other students as well as the lecturer (Proserpio & Gioia, 2007) – a communication channel that allows for the interaction that would otherwise have occurred in the classroom. Computer simulation allows for interactivity and a chance for students to actively search for solutions to problems that occur within the simulation.

The technological advances and changes in the educational environment might influence a lecturer's personal perception of education and how he/she interacts with learners - in other words, the lecturer's personal teaching philosophy and theory. Philosophies influence the way one sees the world and theory impacts how one initially interacts with that world (Himes & Schulenberg, 2013). In 1983 before the technological advances in education prevalent in today's educational environment, Dennis Fox published an article in which he delineates simple and developed personal teaching theories (Fox, 1983). These theories are discussed in the section that follows.

## Personal Teaching Theories

In an attempt to find a solution for common misunderstandings between teaching colleagues as well as between lecturers and students, Fox (1983) conducted research that delineated four concise approaches lecturers had to teach. These "basic theories of teaching" expresses the relationships between teaching and learning and illustrates how the relationship can be either classified as simple or as developed. Simple teaching theories include the transfer and shaping theory and suggest that the lecturer is in full control of the teaching encounter as well as the information conveyed to students and that students are passive participants. In developed teaching theories, traveling, and growing, students are seen as active participants of the teaching encounter and a contributing partner to their education.

Fox (1983) also identified a third type of relationship between the lecturer and student, simply stated as a hybrid, the building theory. The hybrid forms a bridge between the simple (shaping and transfer) and developed (traveling and growing) theories.

## Transfer Theory

The transfer theory is exactly what it says, it is the transfer of knowledge or information from the lecturer to the students. Those who follow this theory, see knowledge as a commodity that can be transferred from one person to another. The transfer theory can be divided into two variants. The first variant focuses on the breaking down of information into simple pieces and it being transferred without any distortion taking place as a result of the simplification. The second variant is known as the broadcast theory and is based on the lecturer just sharing information with students regardless of whether or not it is applicable to either the student or the situation.

## Shaping Theory

This theory refers to the process of shaping students into a predetermined pattern. Lecturers embracing this theory would normally use verbs like "produce" and "develop" when they talk about their teaching practices. Followers of this theory regard the shaping theory in one of two ways. Firstly, they see it as the actual shaping of minds or secondly as the creation of connections in students' minds. Depending on the discipline in question the way

this approach is applied will vary widely from scientific experiments to classroom teaching.

### Traveling Theory

The traveling theory is a metaphor for the road of education where the lecturer and the students are seen as traveling companions. The main drive behind this theory is that lecturers have experienced it all before and is guiding the student through the process of discovery as a traveling companion rather than a lecturer. It is a cooperative learning process and not just a one-way track.

### Growing Theory

The emphasis of the growing theory is on the personal development of the student. It is about the intellectual and emotional development of the student but is not limited or inhibited by a preconceived idea of a specified outcome due to the fact that continuous changes are taking place and learning is constantly evolving.

### Building Theory

This theory views the student's mind as a building site, where building material is delivered and a building or a structure is constructed with the building material that has been delivered. In the educational context theoretical content is transferred to the student, although it does not stop there. It is the student's responsibility to apply the theoretical content to construct something according to a pre-determined plan. As the student construct something from the

transferred theoretical concepts the teaching theory is on its way to becoming a developed teaching theory

### AIM AND METHOD

It is clear from the preceding sections that traditionally lecturers teach according to personal teaching theories. It is also clear that the educational environment has changed as a result of technological development. This gives rise to the question: are the personal teaching theories discussed by Fox (1983) before the known technological advances in education, still relevant?

The aim is thus to explore the relevance of traditional personal teaching theories in a technological advanced in an educational environment.

In determining the relevance of the traditional teaching theories, a self-completion questionnaire based on the personal educational theories as discussed by Fox (1983) was developed for this research. The questionnaire mostly incorporated questions that are of a quantitative nature.

The questionnaire was conveniently dropped off by a fieldworker and it was collected by a second fieldworker after five days from lecturers of a leading South African university. A total of 204 correctly completed questionnaires were obtained, which is a 6.74% margin of error at a 95% confidence level and response distribution of 50%.

### RESULTS

The respondents were presented, based on traditional teaching theories, with a

list containing personal teaching theory statements. Respondents were asked to indicate their personal teaching theory on a 7-point scale ranging from 1 = strongly disagree to 7 = strongly agree. For easy reporting on the items scale point 1 - 3 (disagree – strongly disagree) collapsed to form a new category disagree; scale points 5 - 7 (agree – strongly agree) to form a category agree and 4 remains neutral. Table 1 below is indicative of the results obtained for this question.

Table 1

*Distribution of responses on personal teaching theory statements*

|  | Items | 1-3 (Disagree) | 4 (Neutral) | 5 -7 (Agree) | N | **%** |
|---|---|---|---|---|---|---|
| 1 | A student development-plan does not need to specify the exact dimensions and outcomes to achieve. | 72.90% | 10.34% | 16.74% | 203 | 100 |
| 2 | All parts of learning materials are components of a higher system that is interconnected and meaningful. | 3.95% | 10.84% | 85.23% | 203 | 100 |
| 3 | Attitudes, activities, and personal skills are more important than detailed knowledge. | 37.25% | 28.92% | 33.82% | 204 | 100 |
| 4 | Exploration of learning material is a personal activity. | 17.74% | 21.67% | 60.58% | 203 | 100 |
| 5 | If a topic is taught it will be learned. | 48.02% | 15.84% | 36.15% | 202 | 100 |
| 6 | Learned content should be permanent and useful. | 10.40% | 11.88% | 77.72% | 202 | 100 |
| 7 | Training and education are the same. | 73.04% | 12.25% | 14.70% | 204 | 100 |
| 8 | Lecturers have to develop the mind and brains of students. | 21.56% | 15.69% | 62.75% | 204 | 100 |
| 9 | Lecturers are there to shape the minds of students. | 17.74% | 11.33% | 70.94% | 203 | 100 |
| 10 | Lecturers create a possible bridge between theories and concepts. | 3.43% | 4.41% | 92.16% | 204 | 100 |
| 11 | Part of teaching is to deliver the study material to the student. | 23.77% | 16.83% | 59.40% | 202 | 100 |

Table 1 *(Continued)*

|  | Items | 1-3 (Disagree) | 4 (Neutral) | 5 -7 (Agree) | N | % |
|---|---|---|---|---|---|---|
| 12 | Student success is to be measured by practical outcomes. | 9.80% | 24.51% | 65.69% | 204 | 100 |
| 13 | Students should be closely monitored with predetermined outcomes. | 10.95% | 17.41% | 71.65% | 201 | 100 |
| 14 | Students should just study the lecturer's notes. | 86.06% | 4.48% | 9.46% | 201 | 100 |
| 15 | Study material is only significant in terms of what it does for the personal growth of the student. | 49.25% | 22.39% | 28.36% | 201 | 100 |
| 16 | Subjects should have large factual content. | 18.41% | 27.86% | 53.73% | 201 | 100 |
| 17 | Successful learning is a result of well-prepared material. | 11.39% | 18.81% | 69.81% | 202 | 100 |
| 18 | Teaching is a matter of creating connections in the students' minds. | 4.48% | 8.96% | 86.56% | 201 | 100 |
| 19 | Teaching is only an act of conveying information. | 59.71% | 17.41% | 22.89% | 201 | 100 |
| 20 | Teaching takes place according to a predetermined plan. | 13.00% | 22.50% | 64.50% | 200 | 100 |
| 21 | The driving force for learning and growing is internal and should come from the learner. | 7.44% | 13.37% | 79.21% | 202 | 100 |
| 22 | The emphasis of teaching should be on growing the student as a person. | 12.38% | 17.33% | 70.30% | 202 | 100 |
| 23 | The lecturer must guide students in their learning as he/ she knows best. | 7.43% | 9.90% | 82.67% | 202 | 100 |
| 24 | The lecturers focus their attention on knowledge before it is transferred rather than on the act of transfer. | 20.00% | 24.50% | 55.50% | 200 | 100 |
| 25 | The student is a contributing partner in his/her own learning. | 2.00% | 1.99% | 96.02% | 201 | 100 |

As indicated in Table 1, the five items that the respondents agree with, are:

- *The student is a contributing partner in his/her own learning* (96.02%);
- *Lecturers create a possible bridge between theories and concepts* (92.16 %;);
- All parts of learning materials are components of a higher system that is interconnected and meaningful (85.23 %);
- Teaching is a matter of creating connections in the students' minds (86.56 %)
- *The lecturer must guide students in their learning as he/she knows best (85.23 %).*

The five items that the respondents disagree with are:

- *Students should just study lecturer's notes* (86.06%);
- *Training and education are the same* (73.04%);
- *A student development-plan does not need to specify the exact dimensions and outcomes to achieve* (72.09%);
- *Teaching is only an act of conveying information* (18.91%);
- *Study material is only significant in terms of what it does for the personal growth of the student* (49.25%).

The five items that the respondents are neutral about are:

- *Attitudes, activities and personal skills are more important than detailed knowledge* (28.92%);
- *Subjects should have large factual content* (27.86%);
- *Student success is to be measured by practical outcome* (24.51%);
- *The lecturers focus their attention on knowledge before it is transferred rather than on the act of transfer* (24.50%);
- Teaching takes place according to a predetermined plan (22.5%).

**Determining Sub-Constructs**

Principal factor analysis with varimax rotation and Kaiser normalization was conducted on the items to assess the underlying structure for the twenty-five items of the questionnaire. Three factors were requested, based on the scree plot, Eigen values, and % of variance as well as the minimum of three items per construct. After rotation, the first factor accounted for 10.30% of the variance, the second factor accounted for 9.12%, the third factor accounted for 8.27%.

Most factor loadings were 0.4 or above, showing good convergent validity (Chesney et al., 2006). The constructs are therefore unidimensional and factorially distinct, and all items used to operationalize a construct's load onto a single factor. Some cross-loadings were experienced as well as a number of items that did not load anywhere.

Cronbach's Alpha ($\alpha$) was used to calculate the reliability of the sub-constructs. The Cronbach's alpha for the three sub-constructs all yielded Cronbach's alpha

values between 0.6 and 0.8 indicating that the reliability is acceptable. The table below represents the Cronbach's alpha values of each of the three constructs, see Table 2.

The score for each of the constructs *comprehensive; critical thinking and coaching* are represented by a single value by calculating the mean of the applicable items relating to the construct. The constructs' average on a 7-point scale are:

comprehensive 5.09 (s = 0.82); critical thinking 5.18 (s = 1.18); and simple 2.90 (s = 1.12) implying that lecturers prefer the critical thinking.

Each lecturer was categorized by the preferred learning theory as displayed in the Table 3. Lecturers mostly (53.92%) preferred the critical thinking teaching theory.

Table 2

*Cronbach's alpha*

| Sub-construct | Items | Cronbach's alpha |
|---|---|---|
| Comprehensive | 12, 17, 18, 20, 22, 23 and 24 | .70 |
| Critical thinking | 8, 9 and 10 | .70 |
| Coaching | 7, 14, 15, 19 and 25 | .64 |

Table 3

*Lecturer preferred teaching theories*

| Category | % of Total | N |
|---|---|---|
| Comprehensive | 41.67% | 85 |
| Critical thinking | 53.92% | 110 |
| Coaching | 1.47% | 3 |
| Comprehensive and Critical thinking | 2.94% | 6 |
| All | 100.00% | 204 |

## DISCUSSION

Philosophy is the way that a person sees things and the world around him or her; and theory is the way that the person interacts with the things and the world around them. A lecturer's personal teaching philosophy shapes his or her personal teaching theory. Fox (1983) delineates four "basic theories of teaching", i.e. transfer, shaping, traveling,

and growing. These were unpacked and elements thereof were included in a questionnaire that was presented to a sample of lectures, ranging from junior lecturers to senior professors, at a leading South African institution of higher learning.

Simons (1992) was of the opinion that that learning was a matter of who initiates and controls the learning function and that the interaction between the lecturer and

student influenced the development of thinking and learning skills. It is clear from the results that lecturers emphasize the role of the student in higher learning by agreeing to the statement "*The student is a contributing partner in his/her own learning*". Lecturers disagreement with the statement "*Students should just study lecturer's notes*" and are more or less neutral when it comes to whether a*ttitudes, activities, and personal skills are more important than detailed knowledge*. A factor analysis revealed three constructs with acceptable internal reliability, on teaching theories comprising comprehensive, critical thinking and coaching. The comprehensive theory entails teaching the student everything there is to know about the subject at hand. The critical thinking theory focuses on application and problem solving and applying the learning material to address a problem or opportunity. In critical thinking and comprehensive teaching, theories represent independent learning. Lecturers and students shared control and are co-responsible for achieving learning goals, implying that there is a high level of interaction between lecturer and student. The third teaching theory, coaching, is basically telling the student what he or she needs to know to pass the exam. The coaching theory is lecturer dependent learning, where students believe that the lectures are the persons who are there to make them learn, to motivate and inform them and control and evaluate their learning (Shuell, 1988). Lecturers are orientated towards controlling learning as they feel responsible for students' success (Deci et al., 1982). In other words, lecturers are orientated to follow coaching like teaching theory. On the other hand, more than 80% of lecturers see independent learning as an important learning goal (Simons, 1992). Putting it differently, lecturers would like to deploy critical thinking and comprehensive teaching theories while lecturing. The research supports the seminal work of Simons (1992) as the findings revealed that 95.59% of the lecturers prefer critical thinking (53.92%) and comprehensive (41.67%) teaching theories. The study however did not address the question of whether lecturers teach according to their preferred personal teaching theories.

## CONCLUSION AND RECOMMENDATIONS

The research aimed to determine the relevance of traditional personal teaching theories in a technologically advanced educational environment. When comparing the emerged theories to the traditional personal theories as identified by Fox (1983), the theory categories (simple, developed, and hybrid) are aligned. The coaching theory matches the simple category due to items such as "*students should just study lecturers notes"* and "*teaching is only an act of conveying information*". Critical thinking theory fits the developed category due to statements such as "*lecturers have to develop the mind and brain of students*" and "*lecturers create a possible bridge between theories and concepts".* The comprehensive theory, due to statements such as "*student success is to be measured*

*by the practical outcome"* and *"the lecturers focus their attention on knowledge before it is transferred rather than on the act of transfer,"* fit hybrid theory.

To conclude, the traditional personal education theory categories (simple; developed and hybrid) are still relevant, however, the theories itself are not relevant as lecturers are combining teaching theories by combining theories to fit the technological developments and to cope with peer and student pressures within the educational environment.

It is of strategic importance for institutions to know what teaching theories are used by lecturers. An institution's image as a place of higher learning can easily be damaged it the teaching theory and the level of study is a mismatch. It is therefore recommended that the actual learning theory that lecturers apply in teaching be researched as a lecturer might prefer an independent (critical thinking or comprehensive) teaching theories but apply a dependent (coaching) teaching theory in the learning environment. It is furthermore recommended that students' approach to learning is researched as it will enable institutions and departments to formulate a teaching theory that will improve students' learning experience. A mismatch between the teaching theory and the learning style can cause learning failure, frustration, and demotivation.

The research is exploratory in nature, convenience sampling was used and it is limited to a single institution, therefore, the findings cannot be generalized.

## ACKNOWLEDGEMENTS

## REFERENCES

Ackerman, D. S., & Hu, J. (2011). Effect of type of curriculum on educational outcomes and motivation among marketing students with different learning styles. *Journal of Marketing Education, 33*(3)*,* 273-284.

Chesney, M. A., Neilands, T. B., Chambers, D. B., Taylor, J. M., & Folkman, S. (2006). A validity and reliability study of the coping self-efficacy scale. *British Journal of Health Psychology, 11*(3), 421-437.

Deci, E. L., Spiegel, N. H., Ryan, R. M., Koestner, R., & Kauffman, M. (1982). Effects of performance standards on teaching styles: Behavior of controlling teachers. *Journal of Educational Psychology, 74*(6), 852-859.

Fox, D. (1983). Personal theories of teaching. *Studies in Higher Education, 8*(2), 151-163.

Ghaith, G. (2010). An exploratory study of the achievement of the twenty-first century skills in higher education. *Education + Training, 52*(6/7), 489-498.

Himes, H., & Schulenberg, J. (2013). *Theoretical reflections: Theory and philosophy should always inform practice.* Retrieved January 20, 2018, from https://nacada.ksu.edu/Resources/ Academic-Advising-Today/View-Articles/ Theoretical-Reflections-Theory-and-Philosophy-Should-Always-Inform-Practice.aspx

Moser, K. S. (2016). The challenges of digitalization in higher education teaching. In T. Zimmermann, W. Jütte, & F. Horvath (Eds.), *University continuing education: Facts and future.* Bern, Switzerland: HEP Verlag.

Proserpio, L., & Gioia, D. A. (2007). Teaching the virtual generation. *Academy of Management Learning and Education, 6*(1), 69-80.

Shuell, T. J. (1988). The role of the student in learning from instruction. *Contemporary Educational Psychology, 13,* 276-295.

Simons, P. R. J. (1992). *Theories and principles of learning to learn.* Retrieved February 15, 2020, from https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=theories+and+principles+of+learning+to+learn+simons&btnG=

Šorgo, A., Bartol, T., Dolničar, D., & Boh Podgornik, B. (2017). Attributes of digital natives as predictors of information literacy in higher education. *British Journal of Education Technology, 48*, 749-767. doi:10.1111/bjet.12451