

Lecture Theatre Pantomime: Fun learning is better learning - Dr. Ian Turner

I. Background

This case study describes the benefits of more creative, passionate and interactive approaches to teaching. I firmly believe that in order to learn you need to be fully motivated by the material that is being delivered, and that as a student if you are enjoying your learning experience and are entertained you can better achieve your academic potential. This case study will show that enjoyment and a jovial atmosphere do not compromise student learning or undermine serious education. The case study is focused specifically on a creative approach for lecture theatre based teaching.

II. Reasons for introducing this teaching method

Lectures are a common teaching element on undergraduate and postgraduate programmes in Higher Education institutions. Lectures have been identified in many studies such as Knight and Wood (2005) as being ineffective pedagogical tools for developing conceptual understanding in learners. There is a general desire from learners for more 'active learning' and for them to be part of the learning experience. Active learning has been shown to heighten attention and motivation as well as increasing their overall satisfaction (Steinert & Snell, 1999). When teaching, the range of approaches (inclusive of active learning) which can be adopted is progressively restricted as class size increases. Large audiences have been shown to suppress critical thinking, fail to address differences in student learning styles, and treat students like passive recipients (Bligh, 2000). Rises in student cohort sizes in the last thirty years have led to an increase of large class and lecture theatre based teaching.

Creative approaches that aim to engage large classes of students can take many forms, but in this case study the inspiration came from the classic medical lecture 'theatre' where students and onlookers crowded around the central performance. Looking back to ancient history provides further stimulation in the tiered amphitheatres of Greece and Rome where drama and role-play were employed by a solo performer to present a pantomime.

Pantomime is theatrical entertainment of a story with deep and rich history that is still popular in the UK today as traditional seasonal fairy tale pantomimes. Whilst pantomime is a diverse form of art, a simplistic analysis reveals many common elements between lectures and pantomimes (see table one). A Pantomime uses a simple story, the use of props, audience interaction "he's behind you" and the space. Lights and sound are used to create an immersive atmosphere in which every audience member feels part of the story. The layout of a standard lecture theatre with the monitor to 'stage left' or 'stage right' and the space for the performance in front of the first members of the audience is designed for a performance.

Pantomime	Lecture Theatre
Pantomime Dame / Lead boy or girl	Deliverer of Academic Session
The Stage	The raised podium / front of lecture theatre
Backdrop / Scenery	PowerPoint Slides
Audience part of the performance	Audience Interaction
Lighting, Music and Sound Effects	Lecture Theatre Audio Visual Set-up
Amphitheatre / Theatre	Tiered Lecture Theatre

Table One: Common elements in pantomime and lecture theatre based teaching

III. Lecturer's perspective

Lecture theatre pantomime (LTP) is a term coined to reflect a more dynamic narrative driven approach to teaching illustrated in this case study. LTP has been used to educate students in a wide range of biological contexts however two specific examples are provided below:

Genetics - LTP is used to deliver an area of genetics called the 'central dogma' in a dynamic 'live' fashion. The narrative is around the enzyme (the lecturer) and his desire to initially, replicate DNA. The pantomime involves simple props such as a washing line to represent the DNA. Pegs, paper plates and signs create various interactive elements for the story whilst the costumes (hats) and role-play support it. The LTP makes use of humour e.g. Arnold Schwarzenegger to represent terminator sequences and audience interaction.

Immune System - LTP is used to explain the basic principles of the immune system. The pantomime narrative is focused around the fictional invasion of a castle (body) by a Viking horde (pathogens) and the roles of the soldiers (phagocytes) and scientists (lymphocytes) in the battle. Each component of the immune system fits into the analogy e.g. Dendritic or Antigen Presenting Cells are 'soldiers' looking to capture rather than kill the enemy. The pantomime is delivered with the aid of costumes, hats and props and delivered using a pseudo-analogy (fictional characters and real scientific terms used concurrently) (see Figure one).



Figure One: pre-LTP session on the Immune System

In both examples the 'background' or scenery is a series of PowerPoint slides covering the lecture topics. These are part of the interaction in the LTP and provide an aide memoir for students when made available through the online learning portal.

IV. Students' perspective

Student testimony shows that LTP has a lasting and transformative impact on the students learning experience and energises them for their whole degrees

"Best lecturer I've ever had... Your enthusiasm and passion for your work transfers to your students when you teach, that is what more people need to achieve." 3rd year student

"A brilliant all-rounder. Has a varied range of teaching tools which can suit all learning types" Graduate

"I think your sessions are interactive and informative and you deliver with such flair and enthusiasm .. [your] sessions have made me sit up, listen, be inspired and have the desire to be a better student and scientist" 3rd year student

"Talk about breaking stereotypes (ones from my home country anyway) - I've expected an old, tired guy in a suit, lecturing in low, even voice. Getting someone with such energy and enthusiasm; making

popular culture references and dragging people from the audience to demonstrate DNA workings - was quite a shock; in a good way, mind you.” 2nd year student

V. Issues

Concerns occasionally arise from peers around the perceptions LTP is trivialising education. An explanation of the content and ‘mapping’ to session and module outcomes offers reassurances. LTP sessions are predominantly at level 4 (stage 1) where concepts are more overarching and susceptible to this approach of delivery. It would be more challenging to implement and the students may not be so receptive at level six (stage 3). LTP is a time consuming approach for the academic to develop, it also requires a certain type of ‘uninhibited’ personality to effectively deliver.

VI. Benefits

LTP as an approach is viewed extremely positively by students. In end of module (genetics example) feedback sheets (two year aggregate) 94.90% of students rated the delivery style and LTP lectures as either ‘very positive’ or ‘positive’. Open comments in end of module evaluations often make reference to LTP sessions e.g. genetics 2016

“Ilan’s lectures were great. His liveliness makes the lecture much more interesting and engaging”

“Its fuelled my interest into a subject I was dreading to study”

“Love lectures by ilan - makes me want to learn as more fun”

LTP has also contributed to increased student performance in end of unit examinations; the mean score on the ‘central dogma’ question 12.94 (SD 4.87) was statically significantly different (paired students t-test, $p=0.000001$) compared to other questions 10.41 (SD 4.14). LTP central dogma questions were also statistically significant compared (unpaired students t-test, $p=0.0009$) to the central dogma question in the year before LTP was introduced 11.02 (SD 5.19).

LTP and other creative approaches, and the feedback from student on these have acted as a positive catalyst in the staff development of other staff for example:

“I started lecturing three years ago and ilan Turner has been an inspirational, thought provoking and innovative guide on my journey to becoming a senior lecturer. In particular, ilan is recognised within the University as being a creative innovator. And what most impresses me is the energy that he puts into trying new methods of teaching and his lack of fear of failure...” (Senior Lecturer in Ecology)

VII. Reflections

LTP is an inclusive approach irrespective of a student learning styles. Using Fleming’s VARK model of learning (which is not without criticism) as an example LTP has elements in the Visual (moving diagrams and props), Auditory (speech / analogy), Reading / Writing (Text) and Kinaesthetic (role-play) domains. In a review by Vark Learn Limited (2017) of 147,632 respondents in a short period 64% of respondents are identified as either bimodal, trimodal or VARK learner who respond to multiple modalities when learning.

A strength of LTP is that it is inclusive and can transcend language and cultural barriers to learning. LTP focuses on the core understanding of the process or the concept (the pantomime or analogy) using a simple technique rather than the terminology or specifics. These are fundamentally important but very difficult to learn without the core understanding.

VIII. Dissemination and Publication

This specific application of LTP has been shared internally at the University of Derby Annual Teaching and Learning Conference Buxton, and nationally at The HEA Effective Lecture series, Edinburgh and

London (March '11); Nottingham Trent University (July '11); Researchers Teachers and Learners conference hosted by The Society of Experimental Biology (March '12); Leeds Beckett (June '15); Nottingham Trent (July '15); and Coventry (Dec '15). It has also been published in the Journal of Innovative Practice in Higher Education, 2014.

Ian J. Turner (2014) Lecture Theatre Pantomime: A creative delivery approach for teaching undergraduate transcription and translation. IPHE Vol.2 (1) pg 1-13

IX. References

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Steinert, Y. & Snell, L.S. (1999) Interactive lecturing: strategies for increasing participation in large group presentations. Medical Teacher. 21 (1). p. 37-42

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