

## *Achieving Creativity Through Research Led Learning and Teaching*

Piotr Zychowicz, Xi'an Jiaotong – Liverpool University, China

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### **Abstract**

In the past few years' creativity seemed to have been the buzzword driving contemporary programmes of education and having a substantial impact on curriculum design worldwide. However, many of those programmes simply include the word 'creative' and leave students to their own devices, without effective guidance or examples of what creativity actually means or can lead to. This also appears to be the case in China, where students are closely supervised throughout their primary and secondary education, and once they progress to university they are expected to study independently without such supervision. One of the ways to encourage autonomy and creativity in HE learning is stimulating the interest and curiosity in that specific area, however not every module can be interesting and inspire curiosity and not every student will find interest in fields that perhaps are not so closely related to their major. This presentation will describe how interest, curiosity and creativity were enthused in year 2 University EAP students at an English Medium Instruction Collaborative University in China through research led learning and teaching.

Keywords: Research-led learning and teaching, autonomy, creativity, task-based learning

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## Introduction

In China the educational climate at schools is still quite traditional, where students are teacher dependent and potentially deprived of the ability to think creatively and critically. When these students reach university level, it becomes necessary for them to take the responsibility of their learning on themselves, and rote learning is not an option anymore. It falls upon the university teachers to dissuade them of their earlier learning habits and introduce them to a whole new style of autonomous and creative learning, which is the key to gaining a good degree and consequently employment. This research paper describes what happens when an unconventional style of collaborative multi-tasked and multi-skills generating assessment is applied at an EMI University in China within a year 2 English for Academic Purposes Built Environment module. In the first section of this paper, the theory behind this research has been discussed, which is followed by a brief literature review. The description of the research is followed by the analysis of the data and the paper concludes with a discussion of the implications for the future.

## Theory and literature review

In order to get access to Higher Education high school students in China are required to sit a national university entrance exam *Gaokao*. The examination is held annually and is seen as the biggest and the most important exam for Chinese students (Zhang, Zhao, & Lei, 2012) *Gaokao* was approved in 1952 by the People's Republic of China, but long before that its predecessor, *Keju* (meaning the Imperial Exam), was established in the Tang dynasty (AD 618-907) and was in place until 1905 (ibid.). The *Gaokao* is frequently compared with the *Keju* due to apparent similarities between the two (Ross & Wang, 2011). The top scorers in the long-existing *Keju* system were guaranteed employment, similarly students with top performance in *Gaokao* will be accepted to a prestigious university. Ross & Wang (2011) go even further to state that graduates of top Chinese universities are almost guaranteed well-paid employment after graduation, a point reinforced by (Zhang, Zhao, & Lei, 2012).

In light of the above, Chinese high school students are under high pressure to perform academically, and are in the centre of incredible rivalry (Schiller 2007 as cited in Liu et al., 2013). Based on previous findings that evaluations, assessments, and rivalry pressures have harmful effects on youths' creativity (Runco 2003 as cited in Liu et al., 2013) *Gaokao* has been extensively recognized as the main culprit of killing innovation and creativity in Chinese classrooms (Zhang et al., 2012). More importantly though, using the *Gaokao* scores as the only indicator for the university admission cruelly narrows students' life-time education down to their performance in a number of tests conducted over a short period of time. Furthermore, Shiqin (2019) also points out that *Gaokao* fixes the content, and methods of school education and the learning process of students who do not have any autonomy within the education system, let alone personalised teaching and differentiation. Students who are academically underprivileged can neither benefit of their strengths, nor enter a university that is suitable for their academic development (Shiqin, 2019). Subsequently, the results of such limited educational choice led to an abundance of social problems. One example of this could be, as per the Chinese phrase, "*high scores and low ability*", which refers to students who are successful in formal examinations but are not equipped with problem solving skills and in general are poor achievers outside of a highly

controlled classroom environment (Liu et al., 2013). Even though Chinese educators understand the situation, in order to improve the school's standing and reputation, high schools have to prioritise *Gaokao* which consequently leads to exam-oriented education. As long as the current condition remains in place, the critical consequence of the entrance examination as a 'talent screening mechanism', the exam-oriented education will continue to be an unavoidable situation (Shiqin, 2019). However, the government recognises the need for change and within the Outline of China's National Plan for Medium- and Long-term Education Reform and Development (Ministry of Education 2010 as cited in Zhang, Zhao and Lei, 2012) recommends that university autonomy and a reform of university admission process are the two key aspects of educational changes that need to happen within the next decade. The Plan also recommends altering the "one-exam-decides-all" process to a robust holistic evaluation using several assessment methods over a prolonged period of time (ibid.).

Given all of the above, preparation of students for real-life tasks and 'teaching' creativity in Chinese classrooms seems of utmost importance. However, one vital question when it comes to research on autonomy and creativity is what 'creative' actually means. Even though, creativity as such has been defined in a plethora of ways without reaching an agreement, it usually refers to the action, procedure or skill to produce something novel and suitable (Newton & Beverton, 2012 as cited in Wang and Kokotsaki, 2018). Creativity is usually associated with innovation, autonomy and imagination (Fleming, 2010). What is more, according to Piaget, nurturing creativity and developing creative people should be the main goal of education (Fisher, 2005 as cited in Wang and Kokotsaki, 2018). However, students do not just simply learn to be creative by 'direct instruction' the expectation in modern higher education is that students are not only creative but also autonomous. A point further reinforced by Bibbings, Bieluga, & Mills (2018) who claim that modern higher education tends to be project based and should emulate real-life tasks, especially within Built Environment education context, which results in expectation that students work independently and learn new skills during collaborative project work. Furthermore, Gunn (2010) asserts that students who learn through collaborative project work benefit from research led learning as they learn new skills through simulating real-life environment and obstacles associated with it. There is a body of literature to recognise the benefits of "Research-Led Learning" especially within Higher Education. The aim of Research-Led Learning is somewhat similar to Task-Based Learning where students are given tasks involving problems or issues and asked to resolve the scenarios as part of a project to stimulate learning rather than the traditional approach of classroom teaching and end of course examination. It is evident that using a design project as part of module delivery and assessment encourages autonomous learning, especially when students are expected to conduct their own research. This is especially true within Built Environment context, Maturana (2014) describes how the design studio is focused around problem-solving particularly within real life projects, where thoughts could be merged in a way that embraces the best capabilities of students within the technical and aesthetic forms of design. Zamorski (2002) further states that truly engaging with a subject or field of enquiry, should be including the ways in which that subject or field of enquiry is advanced, the ways in which students can add to its advancement, and the ways in which critical and creative contributions can be made. It is not just about learning about theories from the past but it is also about engaging with the subject, which means that research plays an essential and central role within it. Maturana (2014, p.11) further asserts that that

the 'real world and the world of architectural practice' are not lacking in problems and that 'design problems offer the opportunity to respond in a creative and responsible manner that demonstrates (...) commitment to a public-spirited education, the wider society and the world'. Therefore, the assessment project within the Built Environment EAP module became the ideal opportunity to address these matters and could become an example to follow for years to come.

## Research

The end of semester module satisfaction survey revealed that year 2 EAP Built Environment students were keen on accessing more subject specific materials and also had valid suggestions regarding module design and assessments. In fact, it became apparent that the assessment concentrated on testing the language skills and did not directly take into consideration creativity, critical thinking and learning autonomy, skills which are key in built environment disciplines. Also, students commented that the assessment did not include subject specific high-quality challenges and did not require them to use a design studio for working and learning.

Comments from students included the following:

*I don't really find the assessment challenging nor interesting. We mostly use the coursebook and I can't really see how is that different from our high school English classes.*

*I would like EAP module to support what I do for my architecture major. At the moment I feel I learned a lot of vocabulary and grammar but I don't know how that will help me with my architecture assignments.*

*This module has just been a repetition of year 1 EAP and I think we could do more interesting stuff that will help us in real life conditions. Especially that in year 2 we have access to design studios.*

*I think EAP should be more related to Urban Planning modules and perhaps the lecturers could share resources and create a common bank. Also, perhaps it would be a good idea to deliver some of the classes within the studios.*

The bank of resources for the module included English for Academic Purposes books and followed the standard syllabus used for that level and year of study. The assessment included giving a presentation on a topic of built environment and also writing a compare and contrast essay. At the end of the semester students were asked to complete Module Feedback Questionnaire and the 137 respondents scored the semester 1 of academic year 2017/2018 4.24 with 5.00 being the maximum value, see Table 1.

<b>EAP Built Environment Student Module Feedback Questionnaire (S1, AY2017-18)</b>	
<b>Question</b>	
The module objectives and learning outcomes were clearly stated	4.31
The module objectives and learning outcomes were achieved	4.17
The module readings (for example, textbooks, journals and articles) were helpful	4.25
Coursework and module assessments were explained clearly and with an appropriate level of guidance	4.34
The supporting activities and resources on ICE were useful	4.27
Overall, I found this module a valuable learning experience	4.13
Overall	4.24

Table1: Module Feedback Questionnaire results  
Source: Author

Given the above result and students' suggestions new assessment was designed which would emulate real-life tasks and follow the principles of research-led learning. In order to succeed academically, students would be required to work in collaboration emulating real-life conditions and facing similar challenges as within employment. To fit in with the time-scale the whole assessment would have to be organised within a 12-week period, with a series of tutorials, studio work and site visits. The students were encouraged to use research-led approach and not only follow the task brief but also research the projects both independently and collaboratively.

The assessment designed included a number of scenarios that consisted of current and discipline specific circumstances.

#### Assessment Scenario 1

*Your firm has been tasked with outlining a potential design for building a new social housing community within the boundaries of Kowloon District in Hong Kong that fulfils all the criteria for health and safety and yet does not require much space. The project under consideration is of utmost importance as in recent years Hong Kong property prices have soared, leaving the elderly and other vulnerable groups without satisfactory housing options.*

#### Assessment Scenario 2

*As urban areas in China rapidly expand, people find themselves in suburban areas further and further away from the original city centres. Quite often new developments do not take important factors, such as flooding and the rising level of seas, into consideration. It is predicted that if action is not taken now some areas of Shanghai might be completely submersed in water by the year 2030. What is more, some projections claim that 17.5 million people currently living in Shanghai would need evacuation, due to rising waters, if global temperatures increase by 3C.*

#### Assessment Scenario 3

*Your firm has been tasked with outlining a potential design for building a bridge within the boundaries of old Suzhou that captures the history and culture of the region. The project under consideration has to be a so-called garden bridge that makes use of nature and greenery; however, the investor is open to a number of options. You should research recent garden bridge*

*constructions both abroad and in China, to see and analyse how they function and the rationale behind them.*

#### Assessment Scenario 4

*In recent years the design and construction of skyscrapers in Asia has become extremely popular and different cities compete with one another when it comes to design of such buildings. However, often enough the so-called radical designs are simply ridiculous, completely impractical and bring nothing back to culture or economy. Your firm has been tasked with outlining a potential design for building a skyscraper within the boundaries of Suzhou Industrial Park that captures not only the history and culture of the region but is also practical and serves a valid purpose.*

#### Assessment Scenario 5

*Concerned with current political situation in North Korea, the government of China would like to request proposals for refugee camps alongside the North Korean border. Some commentators claim that the Korean peninsula is on the brink of war and the regime is on the brink of collapse. China as a neighbouring country should make plans for such an eventuality and if needs be house refugees from North Korea.*

The research-led principles were taken into consideration and using Kolb’s reflective cycle as a guide the assessment task was divided into two components; writing and speaking. Initially the process started with assessment briefs investigation, design reviews and site analysis. Students were also expected to complete a basic initial proposal of around 300 words describing their planned ideas which would at a later stage form the basis of the initial project presentation. After the initial presentations and proposals being completed, more time was allowed for research, proposals improvements and additional site visits if required. During that time the proposals were thoroughly evaluated and additional help from other departmental staff with more expertise was offered. Before finalising their proposals, students were required to critically analyse their designs and lastly describe the changes applied in the final reflection submission. The final critical review looked not only at speaking assessment descriptors but also finalised designs including details, application of feedback given and collaboration. The particulars of both integrated courseworks can be seen below in Table 2 and Table 3.

#### Writing Coursework

<i>* Write a 300-500 word ‘project proposal’ (unassessed)</i>
<i>* Write a ‘Critical Review and Reflection’ based on your project and the competing group’s project, consisting of three parts (assessed):</i>
<i>o Part 1: Reflection I - Initial Proposals (around 300 words)</i>
<i>o Part 2: Critical Analysis (around 600 words)</i>
<i>o Part 3: Reflection II – Proposal Improvements (around 300 words)</i>
<i>The proposal must be written in small groups. The ‘Critical Review and Reflection’ is to be written individually. The proposal is not separately assessed, but it is a core task requirement of the coursework. This task is also linked to the semester 2 speaking assessment.</i>

Table 2: Writing Coursework  
Source: Author

## Speaking Coursework

<i>Speaking coursework will be divided into two events: 1. A group presentation and note-taking (unassessed) 2. Critical Review (assessed 15%)</i>
<i>Both tasks will be carried out in the same groups allocated for the Writing Coursework.</i>
<i>Group Presentation and note-taking (unassessed)</i>
<i>* Groups will give a PPT presentation based on their project proposal explaining what it is and why it will be successful.</i>
<i>Critical Review (assessed)</i>
<i>* In the critical review, you will have two roles: defending your own project and questioning the project of the competing group. * Before the critical review, you and your group members should: o Prepare a group poster to be displayed in the classroom before the review. o Prepare a series of questions based on the competing group's initial proposal * During the critical review, you and your group members will need to: o Examine the competing group's poster and form any further questions. o Respond promptly to questions and convince the competing group that your project will be a success.</i>

Table 3: Speaking Coursework.

Source: Author

## Outcomes

The assessment's complex nature meant additional staff hours being put into organising supplementary tutorials and liaising with other departments to make sure that students were receiving quality feedback on their work and ideas. Additionally, setting up the project scenarios meant added research hours into standard work patterns and visiting some of the locations for the purpose of feasibility checks.

At the end of semester Module Feedback Questionnaire revealed that overall students' satisfaction increased to 4.34 with Coursework and module assessment scoring 4.42, a visible improvement compared with semester 1 of the same academic year, see Table 4.

Respondents: 129

<b>EAP Built Environment Student Module Feedback Questionnaire (S2, AY2017-18)</b>	
<b>Question</b>	
The module objectives and learning outcomes were clearly stated	4.38
The module objectives and learning outcomes were achieved	4.26
The module readings (for example, textbooks, journals and articles) were helpful	4.33
Coursework and module assessments were explained clearly and with an appropriate level of guidance	4.42
The supporting activities and resources on ICE were useful	4.31
Overall, I found this module a valuable learning experience	4.32
Overall	4.34

Table 4: Module Feedback Questionnaire results  
Source: Author

More importantly though, some of the comments made by students acknowledged the changes in assessment procedure and overall the general feel about those was positive.

*Even though the assessment was challenging I feel the collaboration with my fellow group members enhanced my module experience.*

*I was happy with the research conducted as it helped me with other modules and allowed to understand the principles of groupwork better.  
The project I did was interesting and I feel my interests were stimulated sufficiently. I learned a lot about Hong Kong housing crisis and I think the decision makers should urgently look into ways of solving it.*

*To be honest I found the groupwork aspect of the assessment really challenging and probably a little unfair but since a lot of Built Environment projects rely on collaboration, I understand that tensions and disagreements are unavoidable.*

*Even though I wasn't entirely happy with the project assigned I did a lot of independent reading on the topics of garden bridges and the integration of greenery within architecture and planning. It helped me a lot with other modules and hopefully I will be using that knowledge for my Final Year Project.*

*I enjoyed learning about new developments in architecture, especially about the concept of liveability and how to make our cities more liveable.*

*I really feel that this module helped me with not only general English but also Civil Engineering modules. The ability to work with students from other majors allowed me to learn a lot of new vocabulary and skills otherwise I would have never known about.*



Following positive feedback from staff and students the module and the assessment were recognised as an example of good practice and the author was asked to collaborate even further with other departments to create a bank of resources and assessments. Also, following a successful critical review one of the student's entered and consequently was awarded a second prize in the university's 'Research-led Learning and Teaching Student Competition 2018' for their proposed garden bridge design within the ancient city of Suzhou. Another two students from the module entered the Evolo 2019 Skyscraper Competition and were awarded third prize for designing a Biosphere Skyscraper. External moderator's feedback was also encouraging stressing the importance of giving students opportunities to think and act both creatively and critically (see Table 5).

*I find that the range of scenarios for proposals is very well thought out and ideal for students from a Built Environment background. All five are excellent and the refugee camp idea, in particular, is an excellent example of how EAP teaching can be rooted in everyday issues, deeply embedded in the teaching of skills needed to unpack subject specific ideas and knowledge, and above all can motivate students to build knowledge beyond skills and language acquisition. This type of activity really gets students thinking creatively and critically, and dispels the notion that EAP is just English Language with an academic lexicon and without the fun parts of learning a language, as is a common misperception. Here, students are being presented with situations specific to their subjects that are then leading into opportunities for research and writing. The fact that the writing then involves both critical review and reflection means that students are being asked to provide output in different formats that each require a particular set of skills that go beyond simply the linguistic aspect. On the whole, there is a great sense of diversity in these tasks - the fact that group work leads to individual output, and everything is clearly interlinked, with reference also made to a broader linkage to the speaking assessment.*

Table 5: External moderator's feedback  
Source: Author

## **Conclusion and recommendations for future**

Seeing the students' performance in Year 2 of their higher education and comparing it to the work of previous second years, the assessment has clearly enhanced both students' knowledge and desire to work autonomously. It became apparent that by being able to relate to real life the students acquire knowledge faster and with more interest.

The opportunity to collaborate with students from other courses within the Built Environment cluster, has shown that students are doing better with applying the skills and knowledge they have, taking on leadership roles and utilising knowledge from outside of their subjects. Also, even though setting up the assessments requires a significant amount of time and effort, it does produce tangible benefits in the form of professional and educational progress of students. Not only preparing them for real life challenges within employment but also giving them opportunity to research, write and speak in subject specific English providing them with a significant advantage on the international job market. Skills that normally would be acquired in later years, during a work placement or when already in employment. Instead, those skills are refined at university, cultivating the students' employability and greatly

contributing to their overall development. For the reasons mentioned above the assessment development and creation of inter-disciplinary resources within the module will continue in the following years.

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