

# > HEAd'16

## Proceedings of the 2<sup>nd</sup> International Conference on Higher Education Advances



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Proceedings of the 2nd International Conference on Higher Education Advances

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## Preface

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### ***Abstract***

*The series of HEAd conferences have become a leading forum for researchers and practitioners to exchange ideas, experiences and research results relating to the preparation of students and the organization of higher educational systems. The second edition (HEAd'16) was held in Valencia, Spain during 21-23 June 2016. This preface gives an overview of the aims, objectives and scope of HEAd'16, as well as the main contents of the scientific program and the process followed to select them.*

**Keywords:** *Higher education; innovative materials, educational technology, evaluation and assessment, globalization in education.*

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## **1. Preface to HEAd'16**

This volume contains the selected short papers and posters of the Second International Conference on Higher Education Advances (HEAd'16), which was held in Valencia, Spain during 21-23 June 2016. After this second edition, the series of HEAd conferences have become a leading forum for researchers and practitioners to exchange ideas, experiences and research results relating to the preparation of students and the organization of higher educational systems.

The selection of the scientific program was directed by M. Cinta Vincent-Vela and Raúl Peña-Ortiz, who led a team of 140 program committee members representing 40 countries in all five continents. Following the call for papers, the conference received 327 full paper submissions from 54 different countries. All the submitted papers were reviewed by at least two program committee members under a double blind review process. Finally, 104 papers were accepted as full papers for oral presentation during the conference and for inclusion in a special issue of "Procedia Social and Behavioral Sciences". This represents an overall full paper acceptance rate of 31%, in line with the acceptance rate of the previous edition (HEAd'15), which was 30%. This selection ensures a high-quality program which is greatly valued by the research communities. Additionally, 23 submissions were accepted as short papers and 40 as poster communications, all of them receiving high review scores and published by UPV Press in this volume. The program committee chairs congratulate all the authors for having their papers accepted in the proceedings of such a competitive conference.

HEAd'16 also featured three keynote speakers that overviewed important and actual topics: Prof. Lim Cher Ping (Hong Kong Institute of Education) talked about rethinking Higher Education teaching and learning from quality, equity and efficiency points of view. The talk by Prof. José María García Álvarez-Coque (Universitat Politècnica de València) dealt with the Massive Open Online Courses (MOOCs) and the experience they can give to trainers. Finally, Prof. Juan Manuel García Lara (Universidad Carlos III) focused on how to use teaching and student based data to answer broad interdisciplinary research questions.

The conference was hosted by the Faculty of Business Administration and Management of the Universitat Politècnica de València, which has been recently ranked as the best technical university in Spain by the Academic Ranking of World Universities (ARWU) 2015. Valencia is a city of culture and heritage. It is the third largest city in Spain and its location on the shore of the Mediterranean Sea provides their citizens and visitors with a privileged weather.

The organizing committee would like to thank all of those who made this year's HEAd a great success. Specifically, thanks are indebted to the invited speakers, authors, program committee members, reviewers, session chairs, presenters, sponsors, supporters and all the

attendees. Our final words of gratitude must go to the Faculty of Business Administration and Management of the Universitat Politècnica de València for supporting, once again, the HEAd conference, making it possible to become a great event.

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## Study of ocean and wind energy potential with R: an innovative experience in the classroom

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### **Abstract**

*The Engineer School of Eibar initiated the Grade of Engineering in Renewable Energies four years ago. This pioneering educational project has shown many challenges to the teachers of the new grade. Among the different software skills used in this project, R programming language has been a very important one because of its capacity for spatio-temporal analysis and graphical visualization of wind energy and wave energy potential. A quarter of the subject's program in Wind Energy and Ocean Energy has been used via Problem Based Learning for the application of statistical calculus with R. The aim of this contribution is to show some paradigmatic problems solved by the students and the results obtained. Finally, the opinion of the students about the use of R and its learning potentiality have been gathered and analysed.*

**Keywords:** *R programming language; Renewable Energies; Wind Energy; Ocean Energy; Learning by Problems.*

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## **1. Introduction**

In this paper we briefly show the computational techniques used by the research group EOLO of the University of Basque Country because they have been applied in the teaching of the Wind Energy and Ocean Energy subjects. The interesting results of this didactic challenge are described here. Firstly, we will describe the research work and the pioneering grade in renewable energies, and after that, we will show some paradigmatic examples of problem solving by our students applying the mentioned research techniques. The results identify several R programming packages which establish structured methods for spatial and potential problem solving in the classroom. The final discussion underlines the satisfaction of our students and concludes with some reflections about problem solving and the heuristic of experts and novices. The research group EOLO has a long trajectory in mesoscale models in meteorology and in the prediction of wind and ocean waves (Ibarra-Berastegui et al., 2015a; Ibarra-Berastegui et al., 2015b). A challenging educational project, the new Grade of Engineering in Renewable Energies (Engineering School of Eibar, 2015) in the University of Basque Country, was a very good space to apply these computational techniques in an educational way. The new grade started four year ago with 70 students. After basic typical subject in engineering, the students specialized in the third and fourth year in several renewable technologies. Our contribution, from the area of Fluid Mechanics, was related to Wind Energy (third course) and Ocean Energy (fourth course). The teachers have obtained great results in the student's surveys and in the opinion of the teachers the students have executed a very active work based on self-learning and cooperative problem solving (Newell and Simon, 1972). This problem solving work has been done by R statistical programming language (R-cran, 2015), which offers a high variety of possibilities in different scientific areas; for us, mainly in the graphical visualizations and spatio-temporal analysis of datasets. In this way, the students have been able to visualize wind energy and wave energy potential spatially in geographical maps combining R with (Geographical Information System) GIS analysis thought other computational applications as Quantum GIS (2015). For that, data from different mesoscale models (Weather Research and Forecasting, WRF) and remote sensing data (CCMP -Cross Calibrated Multi Platform-, QuikSat, RSS DISCOVER -Remote Sensing Data Discover-, TOPEX, ETOPO1) has been used, with refined datasets offered by satellites which are combined and improved via cross calibrated multi-platform systems. In this way, the students can obtain wind speed and direction at 10 m, isolines of the ocean bathymetry, wave height and period, or the direction of wave flux. Besides that, the students even have been able to compare satellite and mesoscale model data against observed data. In the case of ocean energy final grade projects, several observations of sea buoys of the Spanish State Port Authority have been used for that purpose.

## 2. Learning by Problems

All this activity offers a real and pragmatic way of problem solving to our students, simulating what the scientist do every day and using the logic of discovery instead of the logic of justification (Hanson, 1958). As Clement says (Clement, 1988, 2008) in his deep study of scientific creativity that deals with a problem, there is no difference heuristically between the problem solving capacity of an expert and of a student. That is, the students should know the real scientific practice, and not only the final important and supposedly finished theories (Chi et al. 1981, 1989). The state of the art in this domain has been developed very quickly mainly in constructive problem solving via the use of analogy and different heuristic roles has been pointed out for that. The methodological analogy is an important one and this is our R programming purpose in the classroom for two subjects: Wind Energy and Ocean Energy. Only paradigmatic examples of the student's work are presented here, which together with the other raised problems design a suitable environment for constructive learning (Simons, 1993; Welsh, 2012) based on the versatility of the R programming language.

### 2.1. Wind Energy

In the subject of Wind Energy 23 teams of three students has elaborated the statistics of wind resource and the estimation of annual energy production for different turbine types. For that, Weibull distribution's  $k$  and  $c$  parameters have been obtained to fit the histogram of wind speed (see Figure 1). For example, for that purpose, *MASS* and *ismev* statistical packages have been used (see section 3. Results) by means of *fit.distr* function. Therefore, the Weibull fitting calculates the necessary wind parameters ( $k$  and  $c$ ) to estimate the annual wind energy production of any turbine if we have its power curve.

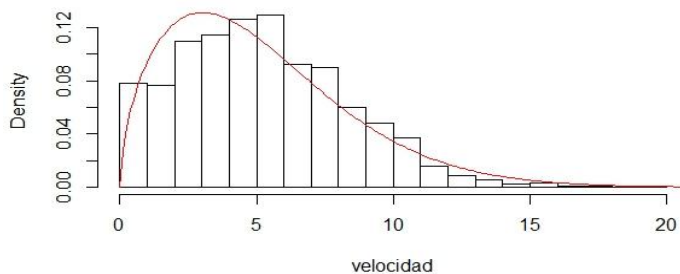
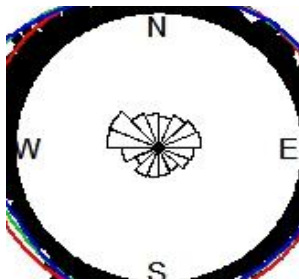


Figure 1. Histogram of velocities and Weibull fitting.

Besides that, wind rose has been plotted using the direction data vector to interpret the qualitative wind characteristics of the considered location (Figure 2). Two packages can be used for that: *openair* or *circular*. The wind rose of the figure fits the Von Mises

Distribution with different smoothness in red, green and blue colour, which is a specific distribution for wind direction that can be represented in polar coordinates. In this way, the main wind direction is visually expressed for different smoothness capacity. The fitting visualizes clearly that the main wind direction is the Northwest in the considered location.



*Figure 2. Wind Rose with three fitting resolutions.*

## **2.2. Ocean Energy**

12 problems about the estimation of ocean wave energy with a duration of a week (4 class hours) has been developed during the subject by two groups of 20 students. Wave energy flux and the spatial distribution of technologies that could capture this energy depends strongly on the depth of the ocean floor or its bathymetry. The data of the project ETOPO1 (2015), the newest generation of topographic and bathymetric global measures by NOAA, are directly linked with R by means of *marmap* package that can be immediately and freely installed by the students. Figure 3 shows one of the maps obtained by one of the students for the Gulf of Biscay. The possibility to draw isolines (isobaths in this case) and obtain colored maps in one of the great potentials of R in mapping spacial parameters.

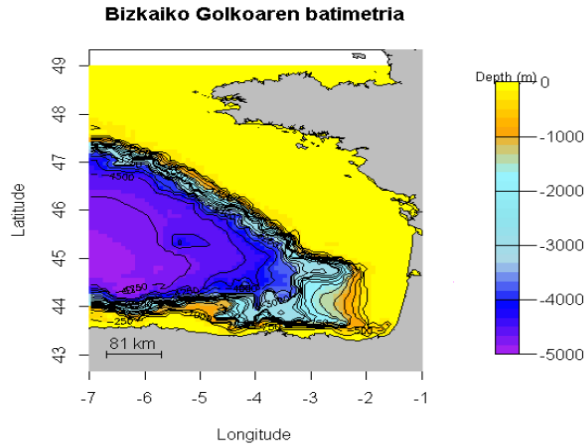


Figure 3. Bathymetry of the Gulf of Biscay.

The following image (Figure 4) shows another coloured map, but in this case the wave energy potential is mapped in the Gulf of Biscay. TOPEX satellite data have been employed for that, calculating the mean wave height and period in its gridpoint where the satellite measures the surface of the sea. Since the wave energy potential is proportional to the period and to the square of the wave height, wave energy potential can be calculated in each gridpoint. After that, R is able to create a gradual coloured map over the original satellite resolution and to reference it by means of a colour palette (in the right).

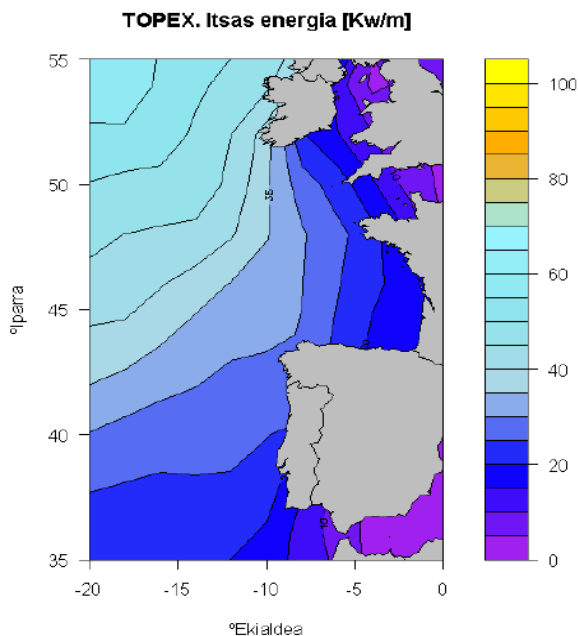


Figure 4. Wave Energy in the Gulf of Biscay.

Similarly, the students have obtained a global map of wave energy distribution (see Figure 5). Besides that, they have represented the maximum (green) and minimum (red) wave energy potential positions in the world, after developing an elaborated calculus with the dataframes offered by TOPEX. In this way, the treatment and transformation of different formats of datasets and geographical reference systems are also practical issues that our students have learned.



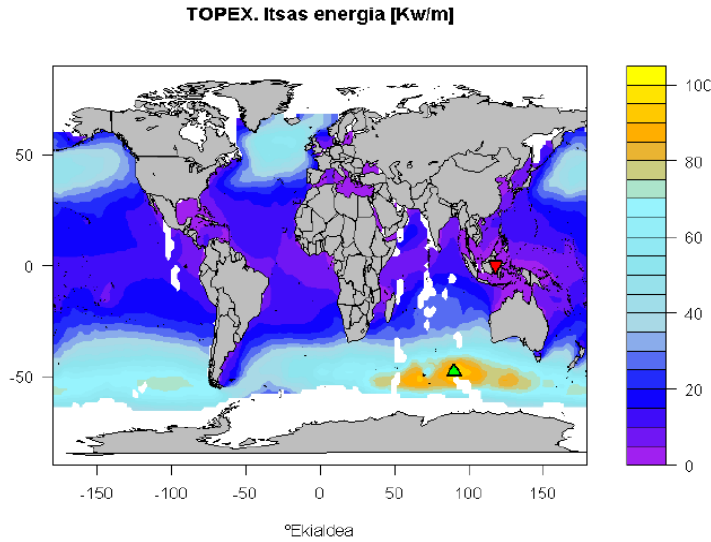


Figure 5. Global wave energy distribution.

### 3. Results

Several statistical methods for the estimation and analysis of wind and wave energy potential has been treated in our course. We want to emphasize the following practical skills that simulates everyday scientific activity developed by our students in the use of R and the constructive and potentially creative character of them:

- the *sp* package to import, export and manipulate geographical data that are structured by raster models (Bivand, 2011).
- The packages *maps* and *mapdata* which offer shorelines, rivers and political boundaries in low resolution (Becker et al, 1995).
- The *marmap* package to study bathymetry and isolines on the ocean floor (Pante 2015).
- *Ismev* and *evir* packages to fit Gumbel's GEV model to the statistics of extreme events as huge waves on the coast (Gilleland 2012).
- The package *RNetCDF* (Network Common Data Form) to read and manipulate the common *.nc* dataset format in climatology, oceanography and meteorology.

Furthermore, surveys point to considerable success in the classroom. The general opinion about the two subjects and the use of R has been between 4.3 and 4.5 out of 5. The students

valued very positively the use of advanced software, and cooperative and practical *know how* in the estimation of offshore wind and ocean wave energy potential.

#### **4. Discussion and Future Outlook**

Compared with other similar subjects students' opinion establishes a high mark, since many of them present general opinion below 4 or even 3 out of 5. We do not have data about the students' opinion for the same subject with other teaching methods because it is a new grade. But the mean opinion for all the University of Basque Country is 3.5, and this reference tells us that the opinion of our students is really good, better if we take into account that it is a totally new subject in our university. In fact, our teaching method weakens the rigidity of justification context in favour of discovery. This tendency is so important that the students design their own open problems as they are working with R. According to our experience, 15 hours are enough to develop the needed programming base for a creative disposition in the classroom. This new ideas suppose a constructive approach in a cooperative way, since the students work together helping each other in every moment. What is more, some final grade projects has been developed starting from the ideas surged in this didactic environment. We think that this educational challenge which binds programming and an open, innovative and exciting area as Ocean Energy offers a powerful example on problem based learning, not only for its capacity to solve many different problems, but because of its capacity to generate open problems in a constructive way. This constructive aspect creates a rich learning environment via cooperation. The teacher lecture work ends in the first third of the subject program and the following time can be used to solve several problems and to raise new ones. The idea is to learn while doing. Furthermore, this activity constitutes a fruitful heuristic work for students that is adaptable to any other environment. Briefly speaking and remembering Clement's work, if we take into account that there is no difference between the problem solving capacity of an expert and of a student, we simulate directly expert's *know how* in the classroom. In our opinion, this methodological focus is what encourages the motivation of our students and their creative confidence, which offers many educational variables for future planning based on problem solving and simulation of what experts do.

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## Gamifying Impromptu Speech for ESL/EFL Students

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### Abstract

*This paper outlines an impromptu speech activity entitled “Dented Helmet vs. Spambot” intended as part of any introductory public speaking course. The activity is designed to overcome specific affective and cognitive challenges of ESL/EFL students, in particular Chinese learners, and is inspired by the principles of gamification (Kapp, 2012) with core gaming elements such as “freedom to fail”, “rapid feedback”, and “storytelling”. The activity requires “Rory’s Story Cubes” (a set of nine six-sided dice designed to spark creativity) and a special set of slides. An exploratory assessment of the effectiveness of our proposed activity was conducted on a sample of Chinese EFL sophomores enrolled in an international branch campus of a U.S. university in China, with 81 students completing our questionnaire. Overall, our findings provided some initial support to the effectiveness of our activity in terms of strengthening students’ ability to communicate orally “off the cuff”, promoting students’ understanding of the role of storytelling in effective presentations, fostering students’ understanding of the major organizational formats used in organizing speeches, and increasing students’ awareness of their nonverbal communication during oral presentations.*

**Keywords:** *Gamification; speaking skills; public speaking activity; impromptu speech; Chinese EFL students.*

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## **1. Introduction**

Chinese demand for English-based education is on the rise. China is not only the leading place of origin of international students in the U.S., but also the second largest importer of international branch campuses (IBCs). Out of the 29 IBCs currently active in China, 11 result from partnerships with U.S. educational institutions, making the United States the largest exporter of branch campuses in China. However, introducing American-style educational practices in China is in many ways challenging: Chinese students tend to be unwilling to communicate orally in class. This reticence is particularly problematic in activities that target students' speaking skills (Girardelli & Patel, 2016).

The impromptu speech, namely “a speech delivered with little or no immediate preparation” (Lucas, 2005, p. 246), is probably the most intimidating activity. A first-level order of issues is based on emotional factors. The lack of (or very limited) wait-time has been found to be particularly anxiety-inducing in Chinese EFL students and may lead to inability or reluctance to speak as a result of such emotional pressure (Mak, 2011). This is coherent with Krashen's (1988) “affective filter hypothesis”, which posits that emotional factors such as motivation, self-esteem, inhibition, and mistake-related anxiety may significantly influence students' outcomes and effective learning. A second-level order of issues is based on cognitive factors. Hsieh (2006) categorized the following problems confronted by Taiwanese students in impromptu speech competitions: 1) limited language skills (narrow knowledge of English vocabulary); 2) limited speaking skills (lack of skills directly related to public speaking, such as speech organization skills); 3) and limited background knowledge (limited life experience that is necessary to discuss about one topic).

In this paper, we describe an impromptu speech activity that has been designed to address typical issues of Chinese ESL/EFL students and present the results of an evaluation tool intended to capture Chinese students' experience and opinions regarding this new activity.

## **2. Gamifying Impromptu Speech for ESL/EFL Students**

The proposed activity is entitled “Dented Helmet vs. Spambot” and has been inspired by the principles of gamification, namely the “application of game elements [...] in learning programs” (Kapp, 2012). In particular, our activity includes the following core game elements:

1. *Freedom to fail*: De-emphasis of grading concerns by assigning a baseline “participation grade”; focus on lessons learned through the gaming experience;

2. *Rapid feedback*: Application of recently learnt concepts; multiple performance evaluations from both peers and instructors in a non face-threatening role playing context;
3. *Storytelling*: The activity is embedded in a unifying narrative. Participants are invited to contribute in developing a story with their speeches.

The use of gamification was intended to remedy ESL/EFL students' two levels of challenges: affective and cognitive. Affective factors are addressed by playing artificial roles in a fictional context. In this setting, ESL/EFL students can step outside the pre-established and potentially inhibiting student-instructor roles with relative codes and cultural conventions, while also saving face in case of mistakes. In addition, the activity addresses second-level, cognitive challenges in that it encourages the practice of certain organizational formats and it refers to areas with large background knowledge, such as super heroes, fairy tales, and other popular forms of fictional story telling. Because of the need of such mental stimulation paired with emotional comfort, the activity is expected to be challenging and rewarding for ESL/EFL students despite its simplified aspects. The proposed gamified impromptu speech activity is intended as a part of any introductory public speaking course (see for instance Lucas, 2005), and its goals include:

- *Goal 1*: Building students' ability to communicate orally "off the cuff" with limited wait-time;
- *Goal 2*: Promoting students' understanding of the role of storytelling in effective presentations (vivid language, introduction/body/conclusion);
- *Goal 3*: Fostering students' understanding of the major organizational formats used in organizing speeches (cause/effect order; topical order; chronological order; spatial order; problem/solution order);
- *Goal 4*: Increasing students' awareness of their nonverbal communication during oral presentations (body language, paralanguage).

### **2.1. "Dented Helmet vs. Spambot:" Gameplay**

The "Dented Helmet vs. Spambot" activity follows the format of popular music competition shows such as *X-Factor* with the instructor playing the part of the *host*. The class is subdivided into teams of a minimum 4 people in each team. One member of each team is selected as part of the *judges*. A list of presenters should be prepared in advance to ensure full participation. During each turn, one member from each team is called to give an impromptu speech. Judges should be provided with a score sheet at the beginning of the activity with the names of the presenters.

The activity requires: a) An overhead projector; b) "Rory's story cubes" (a set of 9 six-sided dice, each decorated with different images to spark creativity, see figure 1;

Gamewright, 2010); and c) a set of “story slides” (figure 2) where three randomly selected Rory’s story cubes are placed at the beginning of every turn (figure 3). The complete sets of slides for both the “Dented Helmet vs. Spambot” and the alternative, martial arts inspired “Black Belt Jones” impromptu speech activities are available upon request by contacting the first author.



*Figure 1. Example of images from “Rory’s story cubes.” Source: Gamewright, 2010.*



*Figure 2. Example of an “story slide”*



*Figure 3. Example of an “story slide” with “Rory’s story cubes” (Gamewright, 2010)*

The instructor (*host*) introduces the activity clarifying the meaning of impromptu speech and introducing the *judges*, who are invited to evaluate the speeches of the *presenters* on a 1 to 3 scale, with 1 being ok, 2 being good, and 3 being excellent. The host then lists the characteristic of an excellent speech (see Lucas, 2005) in terms of effective body language (dominant posture, facing the audience, no “talking to the screen,” open gestures, no defensive postures), eye contact (every member of the audience should be briefly included, no looking at ceiling/floor, no focus on only one part of the audience), and paralanguage (voice dynamics, no fillers). The host explains that participants will be also evaluated in their ability to complete their part of the “story” based on the “story slides” shown on the screen. There are no right or wrong answer; instead, presenters should create their own 2- to 3-minute narrative based on their imagination inspired by the “story slides”.

The activity starts with a demonstrative “warm-up round” (figure 2 or figure 3 according to the chosen mode). The presenters can either create their own introduction or simply read the introduction available in the slide; then, they continue their speech following the pattern shown in the slide; finally, they are expected to end their performance with an original conclusion.

After the warm-up round, the actual activity begins. One member from each team is invited to leave the room. The host explains the basic premises of the story (“an endless fight between two archenemies”) and places in the overhead projector the “story slide” for the first round. To add suspense, the host rolls the “Rory’s story cubes” and randomly picks three dice to be placed in the “story slide”. One by one, the presenters are invited to enter the room and to continue the story. At the end of each round, the host invites the judges to comment on each presenter’s performance (they are expected to highlight at least one strength and one weakness) and to indicate the best presenter(s). After the judges’ comments, the host invites the second group of presenters to exit the room, and so on and so forth, until the final “story slide.”

## **2.2. Debriefing and End of the Activity**

While a member of the jury computes the final score for each team, the host engages the entire audience, opening a discussion on the importance of nonverbal communication, effective organization, and vivid storytelling in successful presentations. The host also introduces the organizational formats (chronological, spatial, cause-effect, topical, etc.; see Lucas, 2005) used in each “story slide”. Following the principle of “rapid feedback” in gamification, participants receive during the activity an almost immediate feedback of their performance from their peer-judges in terms of both an overall score and suggestions on areas of strength and weakness.



### **3. Students' Evaluations of the Activity**

In this section we present an exploratory assessment of the effectiveness of our proposed activity on a sample of Chinese EFL sophomores enrolled in a Sino-American international branch campus accredited by the Middle States Commission on Higher Education. All core classes are taught in English. Sophomore students are required to take a basic public speaking course, which includes two impromptu speech activities ("Dented Helmet vs. Spambot" and "Black Belt Jones") with similar gameplay.

Data were collected on the 11<sup>th</sup> week of the 15-week semester during the course evaluation session. After completing the SIR II survey, students were administered a questionnaire with a set of additional questions that specifically targeted their experience in the impromptu speech activities. Participants were informed that their participation was voluntary. The instructor was not present during the evaluation process.

Respondents were asked to indicate their degree of agreement or disagreement with a total of 11 statements on a six-point Likert-type scale with "strongly disagree" coded as 1, "disagree" as 2, "slightly disagree" as 3, "slightly agree" as 4, "agree" as 5, and "strongly agree" as 6. Following Mak's (2011) recommendation for similar samples of Chinese EFL students, a neutral point was not included in the scales to force respondents to commit themselves; in this manner we tried to avoid having most responses clustered in the neutral mid-point. Directions indicated: "Please be honest: your answers are completely anonymous. The following questions refer to the impromptu speech activities done during this semester".

#### **3.1. Participants**

A total of 81 students completed the questionnaire (N = 117; participation rate = 69.2%). Chinese Mandarin was the first language for the entire sample. 61.7% of the respondents were female, 38.3% were males. The vast majority of the participants were undergraduate sophomores majoring in accounting (72.8%); the remaining sample included International Business (16%), English (6.2%), International Marketing (3.7%) and Finance (1.2%). Participants have been studying English for an average of 12 ½ years (SD=1.66).

#### **3.2. Findings**

Our preliminary findings (see table 1) based on students' evaluations suggest that the proposed gamified impromptu speech may be effective in reaching the intended goals. First, students perceived that the activity was "fun" (Q1: M = 5.21, SD = .68) and "well organized" (Q2: M = 5.32, SD = .72). Participants believed that the activity was "useful" (Q4: M = 2.08, SD = 1.00; Q10: M = 1.86, SD = 1.14) and provided some feedback to understand their own strengths (Q7: M = 5.09, SD = .79) and weaknesses (Q8: M = 5.26, SD = .67). Interestingly, the activity was in general perceived as slightly difficult (Q3: M =

3.75, SD = 1.31). It is, in fact, paramount that the task be challenging enough to be stimulating and in line with the overall objectives of a university level course. At the same time, it is equally vital that the structure of the activity should be easily graspable for the students to avoid potential interference with the overall communicative and linguistic exercise. In the spirit of “gamification”, the topics in the activity should be familiar and amusing and the rules of the games straightforwardly explained by the instructor and understood by the students.

**Table 1. Summary of findings.**

Statements	Mean	SD
Q1. The impromptu speech activities were <b>fun</b> .	5.21	.68
Q2. The impromptu speech activities were <b>well organized</b> .	5.32	.72
Q3. The impromptu speech activities were <b>difficult</b> .	3.75	1.31
Q4. The impromptu speech activities were <b>useless</b>	2.08	1.00
Q5. The impromptu speech activities helped me to <b>understand how to organize my speech</b> .	5.10	.83
Q6. The impromptu speech activities helped to <b>understand the importance of nonverbal communication</b> .	5.05	.96
Q7 The impromptu speech activities helped me to understand <b>my strengths as a public speaker</b> .	5.09	.78
Q8. The impromptu speech activities helped me to understand <b>my weaknesses as a public speaker</b> .	5.26	.67
Q9. The impromptu speech activities helped me to <b>understand the major organizational formats in public speaking</b> (topical, cause/effect, chronological, spatial, ecc.).	5.07	.83
Q10. The impromptu speeches activities were <b>a waste of time</b> .	1.86	1.14
Q11. The impromptu speech activities helped me to become <b>more confident in giving a short speech in English without much preparation</b> .	5.04	1.07

Regarding *goal 1*, namely “building students’ ability to communicate orally “off the cuff” with limited wait time”, our participants perceived that this activity provided a contribution in increasing their confidence in giving a short speech in English without much preparation (Q11: M = 5.04, SD = 1.07). Our findings also suggest that students felt that the activity promoted their understanding of the role of effective “storytelling” in effective

presentations (*goal 2*) by strengthening their ability to organize their speeches (Q5:  $M = 5.10$ ,  $SD = .83$ ). *Goal 3* involved fostering students' understanding of the major organizational formats used in organizing speeches (cause/effect order; topical order; chronological order; spatial order; problem/solution order): also in this case, our sample perceived that the activity was beneficial (Q9:  $M = 5.07$ ,  $SD = .83$ ). Regarding *goal 4*, our findings suggest that the activity contributed in increasing students' awareness of the importance of nonverbal communication (Q6:  $M = 5.05$ ,  $SD = .96$ ).

#### **4. Conclusion**

In this paper we have outlined an impromptu speech activity designed to overcome specific affective and cognitive challenges of ESL/EFL students by implementing the principles of gamification (Kapp, 2012). The activity appeared to be effective in strengthening students' ability to communicate orally "off the cuff", promoting students' understanding of the role of storytelling in effective presentations, fostering students' understanding of the major organizational formats used in organizing speeches, and increasing students' awareness of their nonverbal communication in presentational settings. Additional research is still required to demonstrate the effectiveness of our gamified activities both in absolute terms and in comparison with other treatments intended to overcome specific affective and cognitive challenges of ESL/EFL students.

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## Influencing pre-service teachers' beliefs and practices: a case for an experimental teaching experience

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### **Abstract**

*Previous research has indicated that experience is a more effective tool than theory in changing the teaching beliefs of prospective teachers. This qualitative case study includes the perspectives of stakeholders of a teacher training programme in order to determine the influence of its practical components on pre-service teachers' beliefs and practices. The qualitative study corroborates the findings of earlier studies that showed the limited impact of theoretical knowledge, but also shows that even a comparatively limited experiential component can have a substantial influence on pre-service teachers' beliefs and practices. Additionally, the study includes a number of implications for teacher training curricula.*

**Keywords:** *teaching belief; teaching practice; pre-service teacher; teacher training; experiential learning.*

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## **1. Introduction: A Changing Educational Context in Flanders**

This paper presents a qualitative case study in the Dutch-speaking region of Flanders, where the monolingual, monocultural classroom has become a thing of the past and a mixed-language student population has become the norm (Agirdag 2009; Van Avermaet 2012). During the same period, however, teaching practices have remained quite fixed. Dutch as a second language is just sketchily mentioned in theoretical classes on language didactics and not a required part of the teacher training curriculum. Moreover, transmission teaching is still the norm and innovative practices are the exception, even though innovation is what is called for when dealing with the multilingual context of heterogeneous groups (Vieluf et al. 2013). By and large, Flemish teaching practice has not kept pace with societal changes (Agirdag et al. 2014). One could wonder then, to what extent teacher training is able to prepare aspiring teachers for the multilingual classroom of today and to deal with the increasing need for teachers familiar with second language acquisition and cultural diversity in the classroom.

## **2. Context of this Study**

In Flanders, the training that prepares aspiring teachers for the classroom encompasses both bachelor-level vocational programs and master-level specialization courses, called SLOs (*Specifieke LerarenOpleiding*, literal translation: Specific Teacher Training). An SLO is a one-year program for which universities have a large degree of independence when designing their curricula. This study is set in the context of one SLO in Flanders, but for reasons of confidentiality its name has been replaced with the pseudonym *Flemish University*.

Since 2009 pre-service teachers of Dutch at Flemish University can sign up to achieve 20 hours of the 60 hours compulsory teaching practice by teaching during workshops of Dutch for Academic Purposes (hereafter: DAP workshops) for the student population with Dutch as a second language (hereafter: L2 students). These DAP workshops form an opportunity to experiment with innovative pedagogic approaches and second language acquisition. Every DAP workshop has fifteen to twenty L2 students and is led by four pre-service teachers (hereafter: PST), allowing the larger group to be divided into four smaller ones. The student-teacher ratio has been kept small to stimulate meaningful interaction (Blatchford et al. 2011) and to allow for a didactic flexibility that benefits not only the

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Following abbreviations will be used throughout this paper (in alphabetical order): DAP (Dutch for Academic Purposes), IST (in-service teachers), HSLO (head of the teacher training programme), L2 (second language or non-native speakers of Dutch), PST (pre-service teachers or teachers in training), SLO (*Specifieke LerarenOpleiding*, literal translation: teacher training specifically for Dutch).

stronger but also the weaker learners (Hattie 2005; Harfitt 2012). Since the L2 students attending the workshops have a clear goal – i.e. communicative mastery of the academic idiom in an academic context - the DAP workshops have adopted a task-based approach. Task-based language teaching focuses on interactive practice (Ortega 2007) based on learner needs (Long & Norris 2000; Van den Branden 2006). Examples of typical tasks include taking class notes based on video recordings of their classes; formulating hypotheses, based on scientific observations within their field of interest and writing a formal e-mail to a member of the academic staff. Additionally, the relaxed, communicative atmosphere serves to reduce any sense of hierarchy between the L2 students and the PSTs (Busch 2010; De Mets 2013).

The DAP workshops serve first to assist L2 students in strengthening their academic linguistic skills, and would still proceed without the involvement of pre-service teachers. During the PST's collaboration in the DAP workshops, they work together with two mentors to shape every aspect of the workshops, the only prerequisites being communicative language teaching and learner-centeredness. The PST's receive weekly feedback on the material they produce and on their didactic approach by the mentors and by their peers.

### **3. Literature on Learning to Teach: A Matter of Practice**

Being a teacher requires more than passing on factual information as it also means balancing one's didactic and subject-specific knowledge with beliefs, contextual sensitivity and experience (Scheerens 2007), and translating those facets into educational practice (Basturkmen 2012, Sato & Kleinsasser 2004). Learning to be a teacher means changing perspectives. It means critically questioning one's own beliefs and it implies integrating new skills, rules and knowledge and making them one's own. Simply receiving useful information is not enough to stimulate this dialectic process, since new information does not become actual knowledge until it is internalized. In fact, there does not appear to be a direct relationship between the information that is offered and the way the recipient interprets that information (Timperley et al. 2007). Similarly, Woods & Çakır (2011) argue that new information offered during teacher training is not simply absorbed, but is weighed against existing beliefs in a self-validating dynamic that accepts belief-reinforcing knowledge but rejects information that contradicts existing beliefs (Kagan, 1992; Cabaroglu & Roberts 2000; Mattheoudakis 2007). Consequently, without offering prospective teachers a chance to practice and reflect on teaching, it does not appear possible to transform information into knowledge or instil new pedagogic insights into the minds of prospective teachers (Putnam & Borko 2000; Timperley et al. 2007).

The findings from the aforementioned literature has major implications for the theoretical component of teacher training and has led to a number of studies that address the importance of experiential learning (Busch 2010) and hands-on instructional activities (Hiebert & Morris 2012) in teacher training. It leads Borg (2011) to conclude that teacher education may have a limited impact on pre-service teachers if it focuses more on knowledge transmission than on experiential learning. Wang and Odell (2002) too consider practice as the catalyst for an aspiring teacher to critically assess her own teaching and to examine her pedagogic knowledge. How much practice is needed for it to have a lasting impact, is unknown.

Teaching beliefs, however, are slow to change. Firstly, the beliefs and practices of experienced teachers who act as mentors for aspiring teachers are often quite resistant to change (Vescio et al. 2008). Secondly, the teaching beliefs of pre-service teachers are primarily based on their experiences as learners rather than on their experiences as teachers (Zeichner, 1981; Rath 2001). Society may change faster than educational practices, but if future teachers are to keep pace with these changes and their impact in the diverse classroom, teacher training should prepare aspiring teachers for diverse, multilingual and evolving contexts and should give them the tools to do so (Timperley et al. 2007).

This study determines how effective teacher training is in preparing prospective teachers for classrooms in which an increasing number of pupils and students are L2 speakers of Dutch and consequently, classrooms that ask for an innovative approach. Since teacher training at *Flemish university* relies strongly on theory, the effectiveness of a experiential teaching practice with L2 speakers of Dutch will be examined, as will the perception of in-service teachers on the effectiveness of the theoretical approach.

#### **4. Research Questions**

The qualitative case study presented in this paper is set within the context of the teacher training at Flemish University, where theory makes up for more than two thirds of the credits. It seems relevant to determine whether the dominance of theory in the curriculum is reflected in the views and actions of the prospective teachers.

RQ1: How do stakeholders of the teacher training programme perceive the effectiveness of the theoretical teacher training component in offering innovative didactic knowledge?

The literature review indicates the need for pre-service teachers to critically examine their own beliefs, which can be facilitated by experiencing a context that deviates from the educational norm. At *Flemish University*, pre-service teachers usually gain experience in secondary schools where transmission teaching and hierarchic student-teacher relationships

are the norm, where there is very little cultural and linguistic diversity and where there is no involvement with second language acquisition didactics. RQ2 focuses on the effects of gaining experience in an alternative context, as a part of the teacher training programme, are examined.

RQ2: Do stakeholders of the teacher training programme consider an alternative experience in a multilingual and diverse context an effective method in offering innovative didactic knowledge for teaching Dutch?

## **5. Methods**

This qualitative study is based on information obtained from three groups of respondents: (1) five pre-service teachers who worked as PSTs in the DAP workshops during the data collection, (2) eighteen in-service teachers (ISTs) who worked as PSTs in the DAP workshops during teacher training and (3) the head of the teacher training programme for Dutch at Flemish University.

From October 2012 until May 2013 the five pre-service teachers participated in five focus groups, held in October 2012, November 2012, December 2012, March 2013 and May 2013.

In order to determine whether the outcomes of the focus groups were generalizable to a wider population, eighteen former workshop PSTs, currently working as teachers, were also consulted through a short online questionnaire, they filled out in March 2013.

The head of the SLO at Flemish University was interviewed in June 2013. He was consulted about the approach of the teacher training programme, about its theoretical component and the nature of teaching practice within the SLO.

The focus groups and the interview were video recorded and transcribed. All data was analysed and coded using the NVivo 10 qualitative research software to generate ideas and help identify patterns.

All quotes used in this study have been translated from the original Dutch transcriptions by the main author and have been checked for accuracy by the second author.

## **6. Discussion**

One might expect the comparatively limited time spent teaching working in a different pedagogic context to have relatively little impact. Still, the 20 hours spent teaching in the workshops has influenced the teaching beliefs and practices of nearly all respondents on an intercultural and pedagogical level.



Interculturally, the workshops were an eye-opener for prospective teachers. The ISTs state that the experience “shaped” their view on L2 learners while the pre-service teachers testify to a change in their deficit view on L2 learners. All PSTs used to associate L2 speakers with low proficiency and low socio-economic status.

At *Flemish University* the student population of colleges of education primarily consists of middle-class students from the dominant culture. In the four years the DAP project has been running, no ethnic minority student registered for the Dutch teacher training programme. Simultaneously, the teacher training programme spent no time on intercultural sensitivity, on L2 pedagogy or on training prospective teachers how to work with L2 students, even though it is of primary importance to offer L1 prospective teachers ample opportunity to interact with non-native speakers (Busch 2010).

The pedagogical experience the PSTs gained in the DAP workshops contrasted with their experiences as learners and with the pedagogy they were to embrace in the secondary school context, where transmission teaching was the norm and interactive teaching was out of the question. Still, the DAP experience has influenced the PSTs enough to make them embrace different pedagogic approaches.

The influence of the DAP experience is visible in two ways that can both be seen as different expressions of the same underlying observation: the DAP workshops allow pre-service teachers to gain experience in a new, non-threatening context where they can interact with students instead of instructing them. This experience caused the PSTs to doubt traditional teaching beliefs and, to move away from transmission teaching while allowing for spontaneity in the classroom.

At the start of the workshops, the PSTs intuitively preferred lecturing to interaction, but after a few DAP workshops, they began using more innovative approaches in secondary education too - only to be rebuffed by their mentors. For the pre-service teachers involved in this study, teaching in a way that appealed to the learners was a theoretical concept they had never applied before. All respondents shared stories about teaching classes in secondary schools where they were required to lecture in front of the class. For the pre-service teachers, working from their students' interest was a new, but transformative experience. The in-service teachers confirm the influence of the workshops. Sixteen of the eighteen ISTs still use the approach in their daily teaching, indicating that it is indeed possible to work in an interactive way in secondary education.

Similarly, the pre-service teachers are not convinced that a hierarchic relationship between teachers and pupils is the best way to approach teaching. On the other hand, like the head of the SLO, the pre-service teachers are not sure whether the existing school culture allows for

such an approach. Indeed, when consulting the former workshop PSTs, classroom hierarchy appears to be the most problematic workshop characteristic to maintain in mainstream education. Eleven out of eighteen former PSTs maintain a collaborative approach to teaching in their daily practice. Those who do not use a collaborative teaching model, refer to the school culture as an explanation.

## **7. Results**

The respondents in this study testify to the belief and practice-altering potential of experience-based teacher training. Additionally, they show the theoretical component of teacher training to be largely ineffective if it is unsupported by a diverse experiential component (Busch 2010; Hiebert & Morris 2012). Consequently, even though the respondents in this study received ample theoretical knowledge, knowledge alone did not appear to influence their teaching (Woods & Çakır 2011). This research has no data to support a theory-driven approach to teacher training, but it does indicate that classroom experiences during teacher training have the potential of altering prospective teachers' beliefs and practices (Basturkmen 2012). Even a comparatively limited 20-hour experience in an atypical context influenced the teaching beliefs and practices of the five pre-service teachers and the eighteen in-service teachers in the short term and during the first years of teaching.

If teacher training practice is at its most effective when it is of an experiential nature (Borg 2006), it seems advisable to provide pre-service teachers with a wide array of approaches and contexts of practice to challenge or expand their beliefs. If prospective teachers gain experience only in traditional, belief-reaffirming contexts, it is unlikely that teacher training programmes will become a vehicle for educational and societal change.

The testimonials of the head of Flemish University's teacher training programme and those of the former and current workshop PSTs highlight the influence of experience over knowledge in changing teaching beliefs and practices. Additionally, they affirm the need for a teacher training that is in tune with educational and social realities.

In the Flemish educational system one's academic success is largely determined by one's L1 and one's socio-economic status (Smet 2013). In such a context it seems self-evident that teacher training should offer prospective teachers the tools to help them empower students at risk. Preparing prospective teachers for an educational reality that is no longer the case, seems irrelevant at best.

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## Researching Recognition of Prior Learning; the significance of assessor's values and beliefs within the Totally Pedagogised Society

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### **Abstract**

*This research is exploring the values and beliefs of academic assessors around Recognition of Prior Learning (RPL) in order to better understand their mindset and provide a foundation for best practice informed by all actors. An interpretative research design and random stratified sampling allowed for 31 interviews with assessors in an institute of technology setting in Ireland. Bernstein's theories of classification and framing of knowledge and the related ideas of power and control provided the conceptual framework for analysis of the data. The notion of assessors as actors within the totally pedagogised society also supported analysis.*

*Two themes emerge from the data. The first relates to the primary values and beliefs of assessors around RPL that are related to defending the standards of the formal learning system. The second theme balancing, diverges from this and provides further understanding of positions taken with the assessment of RPL. The research concludes that practitioner networks are necessary to cultivate pedagogic agency for RPL through both the official and pedagogic recontextualisation fields.*

**Keywords:** Recognition of Prior Learning; Totally pedagogised society

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## **1. Introduction**

Recognition of Prior Learning (RPL) is a key aspect of lifelong learning allowing for the validation of all forms of learning within programmes on national and international frameworks. RPL allows for non-standard admissions or for advanced entry onto programmes. RPL can also be used to award credits for individual modules. While RPL is delivered through a range of approaches within faculties and schools around the world (Starr-Glass, 2012; Werquin, 2010), common to all is assessment which should be “grounded in comparison and equivalency” (Starr-Glass, 2012, p. 1). This research focuses on the perceptions of academic assessors of RPL, the individuals engaged in delivering and assessing modules within approved programmes in higher education.

In practice, assessors of RPL find it can be challenging to provide for and difficult to assess (Cooper & Harris, 2013; Hewson, 2008). The unique nature of any individual's pathway coupled with the many settings where learning can occur are often challenging for the RPL candidate to identify and for the higher education system to accommodate. The identification, selection and evidencing of an individual's learning for RPL and the presentation of this learning in a form suitable for assessment are complex tasks. The literature states that it is past graduates who most easily approach RPL case preparation, and that RPL is rarely accessed by those marginalised in society, the very candidates it is intended to support (Hamer, 2011; Hewson, 2008).

This research investigates the values and beliefs of academic assessors (Friesen, 2011), arguing that having a better understanding of the common values and beliefs of RPL assessors may provide insight about how to better support RPL assessment and cultivate pedagogic agency for its practice (Cameron, 2006). The rapid changes in society are reflected in Bernstein's (2000) writings, which provide a conceptual framework here to support analysis of data arising from 31 academic assessors within a third level institute of technology in Ireland.

### ***1.2 Bernstein's theories and the totally pedagogised society***

Bernstein (2000), provides insight into how various forms of knowledge can be structured, transformed and reproduced as curriculum. Bernstein also provides the concept of the totally pedagogised society wherein populations are encouraged to access learning opportunities over a lifetime for various purposes such as life, work, or community involvement (Bernstein, 2000). He presented the totally pedagogised society as a hollow construct, one where trainability and the generic performance mode are used as a means of regulating society, one where various modes of employment and professional identities are rapidly replaced and superseded by other newer emerging identities. Within this realm the

values and beliefs of the academic assessor of RPL are of key significance where increasingly they are presented with requests for RPL. Despite that fact that many institutions have policies and procedures in place for RPL it is often perceived as a marginal activity (Harris, 2000).

Bernstein (2000), provides the 'pedagogic device' as a concept which provides codes and rules to underpin pedagogic practices. By situating RPL assessment within the pedagogic device this research can more effectively explore how the values and beliefs of the assessor might impact on the outcome for the candidate. Of interest is the field of recontextualisation within the pedagogic device. Robertson (2009), provides a model which includes a 'lens of disposition' as a key element. This research argues that the values and beliefs of the assessor will provide a lens through which they assess the RPL case, and that having an understanding of these are key to supporting the assessor, through acknowledging their viewpoint.

This research is significant in that it is the first time that the values and beliefs of the academic assessor around RPL are investigated. It provides a better understanding of their typical mind-set so that higher education providers will be able to take a more holistic approach to providing RPL and be better equipped to respond to the European Commission recommendation of 2012 requesting all higher education to have arrangements in place by 2018 (Council of the European Union, 2012).

## 2. Method

The research took place within an institute of technology in Ireland where a higher education system consisting of both traditional universities and institutes of technology provides a complimentary but distinct provision. Institutes of technology operate on a regional basis and provide more applied programmes than the traditional universities. Ontological and epistemological considerations informed the research, which was designed around the following question;

*What are the values and beliefs of academic assessors of RPL, and how might these values and beliefs support pedagogic agency for RPL?*

The research design took an interpretative stance in order to explore the realities as experienced by the academic assessor, specifically their values and beliefs as identified around RPL. The analytical framework incorporated pilot testing, review and amendment of the research questions in order to extract suitable data (Bryman, 2012). The researcher acknowledges Heidegger's concept of 'being-in-the-world' and that of researching from within a system (Heidegger, 1996).

An academic assessor is defined as any individual responsible for the delivery and assessment of modules within higher education programmes. Ethical guidelines were strictly followed. Random stratified sampling resulted in 31 semi-structured interviews with academic assessors from within four faculties in an institute of technology, namely 2 from within the faculty of art of and design; 4 from a maritime background; 10 from business and humanities and 15 from science and engineering. Table 1 presents the interview questions.

**Table 1; Interview questions**

Q1	In considering RPL what do you think are important values <sup>1</sup> to have?
Q2	Why do you say this?
Q3	What beliefs <sup>2</sup> do you hold which support RPL?
Q4	Why are these beliefs important?

**Note:**

1. A value is that which is held as important and provides a framework as to how we live, think or act (Turner, 2004)
2. Beliefs are 'understandings, premises, or propositions about the world that are felt to be true' (Richardson, 1996, p. 103).

### **3. Results**

Transcription resulted in 160 pages of text and Nvivo software was used to support initial analysis. A total of 50 and 39 codes were assigned against values and beliefs respectively. Table 2 presents an extract of these results showing the three most dominant codes arising in response to the interview questions. The third and fourth column illustrate the number of sources that arose and the number of times each code occurred within the transcripts.

Bernstein's theories of classification and framing of knowledge coupled with the related notions of power and control provided a conceptual framework to examine the values and beliefs of assessors around non-traditional forms of knowledge and epistemological access for RPL candidates. Following analysis data was grouped into two themes:

1. Defending the standards of the formal learning system,
2. Balancing between acknowledging what the candidate knows and maintaining the standards.



**Table 2. Interview transcripts; most dominant codes.**

Question	Most dominant codes	Sources	References
Q1. Values	Upholding standards of awards	13	24
	No ego in the way non judgemental	9	11
	Fairness or objective	9	12
Q2. & Why	Maintaining the standards	16	25
	The ability to perform in the world of work	8	8
	Give people a chance	8	12
Q3. Beliefs	Providing alternative pathways into education	13	20
	Value of learning gained non formally and informally	9	19
	RPL is legitimate	9	11
Q4. & Why	Equal access	13	32
	Trust in the process	13	26
	Integrity	9	15

#### 4. Discussion

RPL has only occasionally arisen within the literature on Bernstein's theories (Cameron, 2006), yet it is deserving of consideration. The values and beliefs of the actors within RPL are key to understanding the complex interactions between people.

As reported in Table 2 the primary values and beliefs of academic assessors as they relate to RPL are strongly aligned around defending the standards of the formal learning system. This came across clearly in the data and is to be expected. All of the assessors (A1 to A31) interviewed, believe that RPL must never devalue a qualification, as the following comments extracted from the interview transcripts illustrate:

- A5 "It is to uphold the standards of the college, the educational standards must always be met. That is really important".
- A8 "Again a third level education, most people would love to have it. A lot of people cannot have it, you know it costs a lot of money, so it is an honour and a privilege to have a qualification, and not to be taking it for granted really by people who say, 'lets find a shortcut'".

- A21 “The comparison of standards is very important, but not only that, and the practical, theoretical, but also the cultural dimension of where the applicant is coming from.

Assessors strive to uphold the standards as expected by society and their values and beliefs reflect this in order to deliver graduates with the ability to participate successfully in life and work (Massaro, 2010).

Aside from defending the standards, what is compelling in Table 2 however is that half of the data arising from the interviews is around balancing between the standards and acknowledging what the candidate knows. This is significant within the totally pedagogised society and will be further explored here. The assessor is caught between the traditional approaches of the formal learning system when assessing RPL cases and the unique and diverse nature of non-formal and informal learning and requires support to develop capacity around its evaluation.

- A3 “So there are individuals who have obtained learning and are making a contribution to society but for which it is not acknowledged, and if it was acknowledged it would give them more versatility and possibilities to maybe move around in the workforce”.
- A9 “It is important to assure them that there are different paths to learning”.
- A31 “I would see that I sit between both of these, support and gatekeeper”.

The significant amount of data around the notion of balancing is an unexpected result, however the institute of technology setting may explain why this aspect is so strong. In the totally pedagogised society, the production and distribution of knowledge are essential elements of economic performance. The academic assessor is expected to be a key actor, updating curricula to incorporate emerging knowledge in a form available for pedagogic discourse and evaluation in order to satisfy market demands for trainability (Bonal & Rambla, 2003). The rapid pace of change within the workplace, and the constant nature of this change acts to place the assessor, “in an uncertain position between knowledge and pedagogy” (Bonal & Rambla, 2003, p. 180). This results in an uneasy reality for the assessor who is called upon to deliver in more responsive, flexible ways and increasingly to deliver the capability for carrying out other forms of assessment.

The comparison of the RPL case with the standards of the frameworks and their evaluation to establish equivalency involves reaching out, taking a different viewpoint, being open to the unexpected. The frameworks act to provide protection in their own right. The ability to step aside from traditional curricula and to value the inherent tension that will naturally arise will support RPL assessment (Starr-Glass, 2012). This balancing capacity is a key ability for successful RPL provision (Starr-Glass, 2012). Nurturing this ability with

appropriate supports may support the cultivation of pedagogic agency for RPL practice amongst academic assessors.

## 5. Conclusion

Cultivating pedagogic agency for RPL should most effectively take a dual approach through both the official and the pedagogic recontextualisation fields. Academic assessors require significant support. This research suggests practitioner networks operating at a micro and macro level incorporating supports where practices are shared and scenarios relayed will act to reassure and build capacity with RPL assessment. It can be argued here that the institute of technology setting of this research piece is within the totally pedagogised society, responsive in general to RPL and accustomed to rapidly changing higher education provision. It can also be argued that a more traditional university setting may result in a different data set and is worthy of further exploration.

The values and beliefs of RPL assessors act to support their real-time evaluation of non-formal and informal learning. The rapid pace of renewal and reinvention within higher education more often results in assessors meeting requests for RPL and subsequently managing their evaluation on their own terms (De Graaf, 2013). Researching the values and beliefs of the academic assessor provides insight into how to cultivate pedagogic agency for RPL practice in a real and supportive way, and open up debate about the inherent difficulties within RPL practice in general. Such debate, grounded in practice, and arising from practitioners within the pedagogic recontextualisation field will cultivate links across the formal learning system.

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## Artist Graduates: Are they Ready to do Business?

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### **Abstract**

*Businesses must expose their products and services to customers so as to make sales and be heard. The world of the artist<sup>1</sup> is no different, and, in the words of the late Luciano Pavarotti, the artist must 'be heard and be seen'. The aim of this paper is to examine if there is a need to ensure that our artistic graduates are 'market ready'. The paper specifically examines this concept in the context of an Irish Institute of Technology (IT). Artists generally do not view the world in terms of business & commerce, only as a creative space. This research study investigates if there is a need for a special purpose award that would allow already qualified or working artists who have missed out on business education to take business modules at any stage in their careers. The findings in this study are rich and the attitudes to the business world by participating artists are interesting. Having established that artists need some business education, this paper then proceeds to outline what may be needed now, and in the future.*

**Keywords:** Artist; Musician; Business Education; Business World.

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<sup>1</sup> For the purpose of this paper, the term 'artist' is deemed to refer to both performing and visual artists.

## **1. Introduction**

Artists are creative and generally do not view the world in terms of business & commerce. Their brain activity is right-hand sided, which is perfect for creativity, but not for commercial activity. With the exception of one IT in Ireland, artistic students are not catered for in terms of business programmes or business subjects for creative students. This paper will examine if there is an appetite among musicians and artists already operating in the field to study some business modules later in their careers if a special purpose award were made available; for example, a certificate in business for the creative arts. Special purpose awards (SPA) meet specific, relatively narrowly focused, legislative, regulatory, economic, social or personal learning requirements. A SPA would afford the artist a new opportunity to up-skill. The focus of this research therefore, is specifically on artists who are currently ‘working artists’ and not on existing artistic students and to examine this concept in their specific context.

## **2. Background & research context**

The nature and content of courses need to be determined by the ‘needs and wants’ of those who are leaving the educational system at any particular point in time (Carter, 2010). In this context, does the working artist have the knowledge to work and operate in the wider world of commerce? This sets the context for this research. There is a lack of structure for involving the student’s voice in decision-making in relation to creative arts courses (HEA, 2013). Dramatic changes which have been taking place in higher education and the consequential disruption to the “traditional identities of place, of time, scholarly and student communities” is changing the structure and functions of third level education (O’Connor, 2006). The genesis of this research is founded in the fact that it is now incumbent upon us as educators to be ready to adapt and change to students needs. The aim of this research is to investigate whether an additional award would benefit ‘artistic graduates’ (those who previously engaged in psychomotor taxonomy<sup>2</sup> of learning) for their future careers. Thall (2002) is adamant that all artists need a working knowledge of law, for example. For every engagement, a business contract is drawn which must be read, understood and signed. If an appetite is found for this proposed certificate for artists, it is anticipated that, in addressing the educational aim & learning outcomes, students will have an opportunity to acquire relevant business acumen.

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<sup>2</sup> E.G: Dave’s (1970) and Ferris & Aziz’s (2005) adaptation of Bloom’s original Taxonomy. The key categories in this competence capture the development in learning from initial exposure to final unconscious mastery (O’Neill & Murphy, 2010).

### 3. Challenges for creative students

Artistic and creative people face unique business challenges and they do not view the world from a business perspective. Creative people are ‘divergent thinkers’ and jump from one thing to the next. Students of creative programmes are unleashed into the world as brilliant performers, artists, dancers, but rarely, if ever, possess any experience of what the competitive marketplace holds for them. The reality is that, to survive, they will have to earn a living in some way. Business students on the other hand, if successful, may also have the benefit of a work placement initially, and find themselves working in a business environment, where they are given clear direction as to what is needed. For the solo artist on the other hand, the problem is just that—‘solo’. These gifted creative people are ‘on their own’ to make business decisions about their futures. *My heroes are the ones who survived doing it wrong, who made mistakes, but recovered from them,* [(Bono, U.2) in Lawton, Harrington, Cunningham, 2008]. For the purposes of this specific piece of research, it was decided to narrow the focus, and only working musicians (+part-time teaching), performing artists, and art painters whose occupation comes solely from art were chosen to participate in this study. Artists with other revenue streams were not chosen to participate. This research therefore investigates *if there is a void in the education of artistic students?*

### 4. Methodology

Drawing from the Interpretivist approach, a post-positivistic qualitative method was applied in this research study, as the researcher wanted to extract a rich meaningful depth of data from participants. Qualitative approaches have their philosophical origins in phenomenology (Burnell & Morgan, 1979), & a phenomenologist believes that the world & reality are constructed socially where meaning is found from people (Easterby-Smith *et al.*, 2015). The researcher wanted to delve into the feelings and attitudes towards the research topic. An initial pilot study was conducted to establish if there was an appetite for business knowledge among established artists. Following the positive indications from these initial research findings, full in-depth interviews were then undertaken with a further 11 artists. Theorists [Baker, 2012; Easterby-Smith, 2015; Malhorta, 2015; Saunders *et al.*, 2012] outline that a relatively few number of participants are needed for qualitative in-depth interviewing, (between six and a dozen); therefore, in line with such theorists 11 interviews were completed. The approach adopted in the selection of the number of interview participants was based on ‘theoretical sampling’, where the number of cases studied is relatively unimportant as outlined by (Glaser & Strauss, 1967). The researcher had the benefit of having access to these artists directly. Ten interview questions were posed to 11 participants. A semi-structured interview guide was used for the face to face interview

element, and the findings were analysed using grounded theory, developed by Glaser & Strauss (1967), thus enabling the researcher to extract meaningful data. In grounded theory, the researcher begins with the transcript from the interview and sifts through the data to group and categorise it. Participants included visual and graphic artists, keyboard players, string players, composers, conductors, and singers. The pool consisted of part-time performers (supplemented their income teaching their instrument) and full-time artists and musicians, with both a national and international profile. To triangulate the data, ensuring reliability & validity, one focus group with a further 6 artists drawn from a different pool was undertaken to tease out ideas arising from the interviewee process.

## **5. Literature**

### **5.1. The Artist**

An artist can be defined as a person who produces works in any of the arts that are primarily subject to aesthetic criteria, a person who practices one of the fine arts, especially a painter or sculptor, a person whose trade or profession requires a knowledge of design, drawing, painting, etc., a commercial artist, a person who works in performing arts, as an actor, musician, or singer; a public performer—a mime artist; an artist of dance, a person whose work exhibits exceptional skill, (Dictionary.com). The Oxford dictionary defines an artist as the various branches of creative activity, such as painting, music, literature, and dance, (Oxforddictionaries.com).

The question of what is art has long occupied theorists and philosophers, but the issue of who or what is an artist is no less vexing (Grant, 2010). The artist defines art, and it seems increasingly true that nowadays artists also define who and what they are. Definitions by nature are confining and restrictive, while art and its makers seek to be expansive and inclusive: It may be simpler to state what makes an artist a professional than what defines an artist (Grant, 2010). ‘Artist’ has become a universal statement of creativity or, someone who does something well. Socially, artists are often defined by the positive (freedom-loving, convention-defying) or negative (egotistical, bohemian) characteristics that other people attribute to them. Part of an artist's job is to understand how artists are seen and what is expected of them, whether that be a certification committee that wants to see the art, a funding source that wants to read an artist's proposal, or the government that wants to see receipts (Grant, 2010). According to the HEA (2013), in the creative arts in Dublin, for example, what is problematic in terms of defining art is where there is a level of innate prioritisation and separation in the system between the perceived ‘fine arts’ and applied arts and crafts. “Under contemporary and inclusive definitions of the arts, the high and low arts should not be viewed as opposites or even as a continuum, but rather as a transformation of contemporary practice”, (HEA, 2013:44).



Grant (2010), outlines that in the US, the Internal Revenue Service (IRS)<sup>3</sup> takes a narrow view of what or who can be defined as a professional artist. Specifically, in relation to individual taxpayer's returns, nine criteria are applied by the IRS in order to separate professionals from hobbyists (professionals may deduct their expenses, hobbyists may not). Some of the criteria for example includes—is the activity carried on in a businesslike manner, does the artist intend to make the artistic activity profitable?, does the individual depend in full or in part from income generated by the artistic work?, are business losses to be expected, or are they due to circumstances beyond the artist's control?, does the activity generate a profit in some years and, if so, how much of one?, will the artist make a profit in the future?, Does the artist have the knowledge to make the activity profitable?, (Grant, 2010). Ironically, Thall (2002) purports that it is widely accepted that really creative people will not know or understand their business. After all, “aren't they living in the realm of the idea—the eigenvelt—the world that is interesting precisely because it is not the mitvelt—the shared world, the concrete, tangible world that can be objectively evaluated?” (Thall, 2002:x). Grant (2010) states that the artist need not answer ‘yes’ to every IRS question in order to legitimately deduct business related expenses. The IRS demands proof, however, that an artist makes a genuine effort to earn a profit in three years out of a five-year span. Artistic credentials may help an artist make a case that he or she is a professional for tax purposes, including earning a bachelor's or Master's degree in fine arts, membership in an artists' society, inclusion in Who's Who in American Art or some similar directory (Grant, 2010).

A knowledge of business is vital (Thall, 2002), and corporations, for example, know that, in order to make sales, they have to expose their products to consumers over and over again. They 'brand' their names into the minds of buyers, so that their products are easily recognized and most likely to be purchased. Through mass advertising on television, newspapers, billboards, etc., big businesses continually drum their identities into one's head; “Ford, Ford, Ford; Pepsi, Pepsi, Pepsi; McDonald's, McDonald's, McDonald's” - Art is no different, (artbusiness.com). In the new environment of technological advance, with the need for the artistic community to adjust to the manifold changes occurring both in the creation and delivery, there is more reason than ever before to examine the industry so that we can better fine-tune our business relationship (Thall, 2002:x). Grant (2010) concurs that artist must have business knowledge, which is confirmed in the IRS statement of what an artist is (IRS.gov) to make the activity profitable and be defined for law enforcement. The best formalised arts education should prepare the student, appropriately, for a career in the creative and/or entrepreneurial world (HEA, 2013). Irish higher education should equip students with the skills to play a strong part on the world stage. This is not just in terms of

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<sup>3</sup> The IRS is the U.S. government agency responsible for tax collection and tax law enforcement (IRS.gov).

quality and reputation, but as a strategy for innovation that builds a robust future for the Irish society (HEA, 2013).

## **6. Research findings**

The findings of this study are very interesting. Artists really do not understand the world of business and in the words of one contributor, “the world is consumed with numbers and trying to make profits. Art is not about that it is about creativity. Their rules don’t apply! Business men fail to see the non-monetary and immeasurable benefits of music and arts”. The reality of course, is that all musicians and artists must make a living and eat. Survival and a need to pay the bills was the main theme that emerged from the focus groups, but the majority, with the exception of 2 contributors, had no idea of how to apply business skills to their own business—either being a musician, or a visual artist. Of the 11 interviewees, 4 had masters’ qualifications in their specific artistic field, (performance/ visual art), 4 had relevant degrees, and 3 had no qualifications in their artistic endeavours. 100% (all) of participants viewed themselves as ‘artists’ even though, as one stated, “I am a musician but an entrepreneurial description is more realistic, but I can’t see myself in that light at all!”. We were never thought to be business people, only top performers, this is where the pressure was applied”. Another artist outlined that “you had to fight to be the best artist that you could be. The idea of how we would sell our paintings was never to the fore in college”. Another participant stated that, “we only worried about coming out on top of our class and getting noticed!” Another interviewee said, “I burned my fingers off of me trying to be the best in my field. This was my only focus”.

This current research has found that artists find themselves “at sea” when faced with the challenging business world. All participants agree and believe that there was a gap or void in their education due to the lack of business knowledge and experience. One participant outlined that “it would have been great to have had financial planning advice in college”. 82% cited knowledge of marketing as an issue, while 100% of contributors stated that legal issues and contracts were challenging. 90% of participants relayed that they needed marketing and online training to access markets. “On the go learning” is the only way that I can manage”. Social and new media are also mentioned by participants, and one surmised that they had “spend years practicing the piano keyboard, and now half of the time as a musician is spent on the computer keyboard”—“how ironic is that?”.

One contributor stated that, in Europe, musicians are “more into their art and themselves, whereas in the US they tend to hustle much more and are not afraid to promote and put themselves out there”. Another contributor described that the international arena is a difficult one, especially, in the United States. “I write movie scores, and I have to be in the US market for this”. “In the states, you must have all of your paper work in order or you

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