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**Sunita Dewitt**

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# Flipped Jigsaw in Entrepreneurship Education

Sunita Dewitt<sup>1</sup>

*International Centre for Transformational Entrepreneurship, Coventry University,  
Coventry, United Kingdom*

<sup>1</sup>*Author's e-mail: ab8943@coventry.ac.uk*

## *Introduction*

The field of entrepreneurship and its related disciplines have gained much interest over past decades, an interest that stems from the perspective of entrepreneurship playing a significant role across the globe impacting at individual, economical and societal levels to its delivery in the field of teaching and learning. Its rapid growth and evolution over the past fifty years has been capturing the attention amongst others of governments, policy makers and scholars. Therefore, it is no surprise that enterprise and entrepreneurship education is also gaining attention.

The past decade has witnessed a rise in the importance of enterprise and entrepreneurship education in view of encouraging venture and value creation, and related entrepreneurial and intrapreneurial skills and competencies that contribute to employability as well as entrepreneurship (EntreComp 2016). A number of countries across the globe have made entrepreneurship education a compulsory part of their higher education curriculum. Furthermore, countries with rising youth unemployment rates place importance on job creation and therefore enterprising behaviour has become part of national education policies. Investing in entrepreneurship education yields high returns (British Council, 2019) and it is no surprise that there has been rapid growth in entrepreneurship education at a global level (Neck and Green, 2011, Solomon and Fernald 2014), with country-specific demands being fuelled by national government policies. The UK has seen a rising demand for business courses in recent years (HESA 2019), and increasing interest in entrepreneurship related courses.

Programmes in entrepreneurship education are on an increase with higher education institutions including them as part of business school education, coupled with this is the growing interest of students from the global markets enrolling on business and entrepreneurship courses. Along with home students, the UK appears to attract a number of international students on their business related programmes. The past five years (2013-2018) has witnessed a high number of students on Business and administrative programmes (HESA statistics 2018). Entrepreneurship is now being recognised as a separate area of study from Business courses, although the majority of the time still placed in the business schools. Although, entrepreneurship courses attract lower numbers compared to mainstream business courses, ‘entrepreneurial intent’ appears to be strong among the general student population in a research conducted by the International Centre for Transformational Entrepreneurship on first year Coventry University students, suggesting that students at some point in their lives may have a desire and possibility of wanting to have a business (Smith et al 2017). The increased interest in entrepreneurship courses places demands on universities to provide creative and innovative teaching strategies (QAA, 2019) as well as employable graduates. Furthermore, there is expectations by students for subjects to be engaging, stimulating and enjoyable.

There remains constant pressure on higher education institutions in being ‘responsive to learners needs and to provide engaging pedagogies to the new generation of student/learner clientele across the academic disciplines. There has been a shift towards student-centred learning (Schneckenberg, 2009) and indeed the emergence of new creative and innovative ways of teaching have contributed to the field of teaching and learning, whilst ensuring that students’ needs are met. Furthermore, the contribution of technology has provided innovative ways to deliver and enhance education. Although, teaching techniques are diverse some techniques are more favourable in specific subjects and may be drawn on frequently. The discipline of entrepreneurship is a wide and varying field of study ranging from venture creation to growth and expansion, creativity and innovation, to finance and strategic processes. In the context of the UK, teaching in this field is underpinned by ‘About, For and Through’ entrepreneurship (QAA, 2018). Enterprise and Entrepreneurship undergraduate degree programmes often require both practical and theory-based learning and a range of pedagogies are used to deliver

education in this field. With pressure on higher education institutions to provide engaging teaching pedagogies, and in order to gain and retain students, universities are faced with challenges of making their teaching creative and innovative with focus on increasing student engagement and satisfaction, as well as providing employability skills.

This study seeks to explore innovative entrepreneurship pedagogy in context of theory-based module (learning ‘About’ entrepreneurship) which is part of the BA Enterprise and Entrepreneurship course at Coventry University. Students often find theory-based modules challenging due to the acquisition and retention of extensive knowledge that is necessary for the module. In delivering theory content lecturer-led sessions often appear to be the most common form of delivery, however, these tend to dissuade students. In order to fully engage students and ensure that learning is taking place it has become crucial to re-address and innovate the teaching strategies in the view of optimising on delivering content and making the most of time and space. Furthermore, ensuring that skills such as critical thinking, evaluation and problem solving among others are also evident. To address these challenges, two teaching strategies: Flipped Classroom style and ‘Jigsaw Strategy’ have been fused to provide an innovative and creative way of teaching the theory-based (content-heavy) module.

### *Background*

The UK’s education governing body the QAA (2018) highlights the value of Entrepreneurship Education as providing ‘supporting behaviours, attitudes and competencies’ that impact the individual learners’ in their career and therefore, have a chain effect on adding ‘economic, social and cultural value to the UK’ (QAA 2018 p2). Entrepreneurship programmes at Coventry University’s Faculty of Business and Law run by the International Centre of Transformational Entrepreneurship deliver a range of courses from undergraduate to Masters as well as doctoral programmes. And place focus on making their teaching creative and innovative, especially catering for diverse learners. Therefore, a range of styles are adopted to ensure that learning is taking place. This work focuses on an undergraduate module (Theory of Entrepreneurship) undertaken in the first year during semester 1.

This module is challenging for students due to its nature of obtaining a knowledge base, understanding, evaluation and application of entrepreneurship theories over a period of 11 weeks. Although, both lecturer-led and student-centred teaching styles are evident, the module remained overwhelming and challenging for students. Therefore, the rationale behind this study was to implement an innovative pedagogy that would maximise on time, content and space, as well as the incorporation of employability skills.

### *Entrepreneurship Education*

Entrepreneurship education traces back to 1938 where education was applied in entrepreneurship by Professor Shigeru Fujii in Japan (Mariana, 2015; McMullan and Long 1987). In the US the 1940s saw the emergence of courses in small business management, however it was in 1947 that the first course in entrepreneurship was introduced at the Harvard Business School USA by Myles Mace (Mariana 2015). The decades that followed saw rapid growth in entrepreneurship education (Soloman 2007). Its evolution has witnessed its multi-dimensional aspects, from providing a knowledge base to businesses processes, opening up mind-sets for creativity and innovation to equipping individuals with necessary tools and techniques for business entry (Fayolle 2013). There have been a chain of definitions emerging over time coupled with the outline of core objectives for entrepreneurship teaching (Solomon 2007, Vesper and McMullan 1998). Terms such as business education, enterprise education and entrepreneurship education have also been used interchangeably in the earlier years, however, more distinctive definitions have now emerged. Although, there are some similarities there are numerous differences, one of the main objectives that differentiates business education and entrepreneurship education is the generation and rapidity of how to ‘exploit business opportunities as well as a wide range of activities for business entry’ for the latter (Solomon 2007, Vesper and McMullan 1998). Entrepreneurship education has a number of purposes, including the transfer of knowledge creation processes, cognitive knowledge, venture creation, the ability to discover new opportunities (Wahid et al 2017, Mwasalwiba, 2010)). Gibbs (2002) highlights three key objectives for entrepreneurship education; developing an understanding of entrepreneurship, creating and developing an entrepreneurial mind-set and venture crea-

tion and operation (Gibbs 2002). In terms of teaching strategies Fayolle (2013) emphasised that focus is often placed on active pedagogies, however, there is a lack of research in regards to ‘adequacy between methods used and audience specificities and methods and contents, methods and institutional constraints (culture, time, space and resources)’ (Fayolle 2013 p.696).

There are a number of studies that highlight the categories of entrepreneurship education (about, for and through). Learning ‘about’ entrepreneurship places focus on building a knowledge base about entrepreneurship (Mäkimurto-Koivumaaa and Belt 2016), the ‘for’ places emphasis on preparation for students to act as entrepreneurs (Johansen and Schanke 2013) the idea is to help students discover what is to be enterprising (QAA, 2018) and the ‘through’ focuses on being involved in a entrepreneurship through business projects, enterprises or business incubators (Kirby 2002). A range of studies have explored various perspectives of these elements (Jamieson 1984, Henry et al 2005 Herrmann et al 2008). Politis (2008) highlighted that that entrepreneurial activities via formal training and education do not have a strong impact on entrepreneurial knowledge development. Jack and Anderson (1999) highlight that students are required to have knowledge and theories of entrepreneurship and the ability to combine them with practice in order to become reflective practitioners. In order to create effective learners the responsibility rests on teaching styles that draw out the passion for engaging in learning.

Programme and course delivery can be a challenge for educators as a result of various expectations from students, employers and the university. In that educators need to adhere to course learning objectives and outcomes, placing focus on the educators to implement relevant and adequate teaching in entrepreneurship education (Balan et al, 2018). Skills and knowledge in entrepreneurship can be taught in the right environment and education is key in entrepreneurial development of individuals (Gibb & Hannon, 2006). Entrepreneurship teaching styles are important contributors in entrepreneurship education. It is vital that entrepreneurship students are exposed to diverse pedagogies in their teaching to develop a range of skills and tools that would enhance their ability in entrepreneurship related activities. This is imperative as students are required to deal with the entire entrepreneurial process (Fayolle, 2010). Other areas of entrepreneurship education

place importance of effective teamwork which is often significant in successful entrepreneurship (Balan and Metcalf 2012).

### *Pedagogies and Methods*

Teaching strategies are the ‘back bone’ of student learning in the university environment. ‘Universities globally are engaged in a dynamic and thrilling exploration of the interplay among the environment, pedagogy, and learning’ (Cohen, 2016). There are an array of teaching methods in reviews of the content of entrepreneurship courses (Kailer, 2009, Balan, et al 2018). The decades have seen an evolution in the field of teaching and learning styles and this has been further fuelled by the driving force of technology, therefore, reshaping the teaching and learning environment of the education sector. Entrepreneurship education consists of a wide range of teaching methods including group projects and discussions, seminars, case studies, fieldtrips, games simulation, problem based learning, team-based learning among others, with various methods placing focus on the ‘for and through’ entrepreneurship. As the ‘About’ element is focused on the acquiring a knowledge-base around entrepreneurship, delivery methods can often gear towards lecture based sessions.

Historically, teaching was associated predominately with lecturer-led styles as this was considered the most relevant and adequate way to deliver content and for students to obtain and retain knowledge. Even until the 1970 in the US almost 80% college classroom reported lecture led methods (Cashin 1990). Inspired by the constructivist learning theory, there has over the recent decades been the emergence of the learner-centred approaches (Beaten et al 2016). Within the learner-centred pedagogy framework are the cooperative and collaborative learning styles. Collaborative and cooperative learning has its similarities and differences, however, overall it involves student participation with teachers/lecturers being facilitators of learning. Collaborative learning enables students to ‘provide explanations of their understanding’ thereby enhancing their knowledge (Boxtel et al 2000), it further provides a ‘powerful effect’ for students, especially low achieving students (Lai, 2011) and further provides engagement when problem solving (Dillenbourg et al. 1996, Dillenbourg, 1999). In collaborative learning motivation of learners’

increases as a result of each group member striving not just to contribute to the group but attain their personal goal via group success (Johnson & Johnson, 1989, 1994; Slavin, 1995). This type of learning also provides the opportunity for group members to maximise their efforts as they work part of a team, thereby away from the individual competitiveness. Cooperative learning is also recognised for its engagement, and further for its ‘cognitive, social and affective outcomes’ (Slavin, 1995 in Ghaith, 2003). This type of learning contributes well in the area of enterprise and entrepreneurship education.

The jigsaw strategy is a cooperative learning technique introduced by Elliot Aronson in 1971 (Adam 2013) and had started to emerge in elementary and secondary schools in the late 1970s (Rasor 2008). The strategy positions the students as viewing one another as resources and not competitors (Mengduo and Xialoling 2010, Holliday 2002). The jigsaw technique involves dividing a task in order for the learners to work on the assigned part individually in class and then come together to bring the knowledge of their assigned work to share. This method is recognised for having a number of positive outcomes, including student achievement, improvements in self-esteem, interactive engagement, and building of relationships. It promotes students’ motivation in learning as well as the development of interpersonal skills and enrich students’ achievements (Marhamah & Mulyadi, 2013). However, the jigsaw strategy is limited as it requires the entire task to be taken in the class session and therefore limits the student in terms of time to reflect on their own learning individually. Furthermore, the student is under pressure to complete the assigned individual task in order to move to the cooperative working element of the strategy.

The shifting of learning environments has also become popular in the teaching and learning arena. In particular the flipped classroom instructional strategy has received much attention in higher education circles (Milman 2012). Flipped classroom is not a new concept with earlier recording dating back to the 1800s, where General Sylvanus Thayer adopted it in the US military for engineering students to self-source material prior to class sessions, thereby freeing up class time for critical thinking and problem solving (Moffett 2015). In a flipped classroom the class-based roles are inverted, the class lecture is assigned to homework and class time is then utilised for more active learning. There are many advantages



to flipped classroom and learning, these include learner-educator interaction (Bergmann et al, 2012), the opportunity to maximise time, and provide individualised education (Johnson 2013). Flipped classroom and learning process involves learners to source their own material or are provided with material to review before class session. It provides the learners with flexibility of going through the material (Butt 2014), and once in class it allows lecturer-student interaction. Studies have demonstrated an improvement in student self-direction and responsibility (Bergmann et al 2012). However, learners do need to be self-motivated (Moffett 2015) and course materials often has to be remodelled (Wagner et al 2013). The flipped classroom strategy has limitations as students work individually on their task outside classroom time and therefore there is no scope to share the knowledge with peers.

Student learning experience has become a key part of the teaching process and contributes to student engagement and satisfaction. The importance of class participation is also aligned to this, therefore, asking questions, participating in discussions and activities and offering opinions' (Fuchs 2014) are becoming even more significant. Teaching strategies that involve engaging students in activities and discussions, opportunities of questioning are crucial to ensure that learning is taking place in the most effective way. Over the years innovative ways of teaching have been created to fit subject and discipline specific pedagogies and ensuring that the needs of diverse learners are met. The Flipped classroom and the Jigsaw strategy are effective contributors to this, however, strategies benefit from further enhancements and by fusing and combining pedagogies for single tasks provide reinforcements to learning and teaching. This study has implemented the 'flipped Jigsaw' in teaching 'About' entrepreneurship, in order to provide active (action) based innovative elements to engage and stimulate student learning.

### *Methodology*

The purpose of this study was to combine two teaching strategies –the Flipped classroom and the Jigsaw strategy in the context of theory-based modules in entrepreneurship education. Both pedagogies have been practiced independently previously across academic disciplines, however, there remains a research gap in

fusing/hybridising teaching strategies in order to maximise on time, space, content and full student engagement, whilst also providing employability skills. This paper aims to advocate the flipped jigsaw in enterprise and entrepreneurship education.

The study is based on 'Introduction to Entrepreneurship Theory' module which is part of the BA Enterprise and Entrepreneurship course. The module is scheduled in semester one for first year students. The semester is made up of 11 weeks, with 2 hours twice a week of face to face sessions, as well as 200 self-study hours as per module requirements. The module is a crucial element of the course as provides a foundation in terms of theoretical underpinnings of entrepreneurship across modules. The module consists of two components to the final assessment (written literature review and a 2 hour examination). The sample size is 25 students from diverse background (race, culture, religion, geographical locations and pre-entry qualifications).

### *Methods, data collection and analysis process*

The methodology of this study is three-fold: Practice-based (practice-led), action research and partly observational research. Practice-led research 'gives rise to new concepts in generation of original knowledge' (Candy, 2006). Action research was deployed for its relevance due to contributing to creating new knowledge and improvements in real-life practical problems (Elden and Chisholm, 1993, McKay and Marshall, 2001). Here the focus remains on challenges and problems of learning experienced by the students. Both methods bring together the matter of practice and finding solutions and making improvements in a practice based environment. The author's role in this research takes the form of a facilitator and lecturer. The researcher (Lecturer) also draw on the observational approach to observe class dynamics in relation to learning.

Narrative research approach was also adopted as it studies 'human beings experiences of the world and narratives are drawn from the story telling (Gudmundsdottir, 2001). There is a tendency to use narrative research in education practice and experience studies. Open-ended questions were targeted at the class as a whole, students expressed their experiences of the task, learning and the teaching strategy at the end of the session and the narratives were recorded in field-note

book. The Practice-based and action based elements provided other opportunities, such as collaboration between the researcher and the research subjects (Meon, 2006), this provided further opportunity to play out the strategy and record the impacts. The data is reliable as it is retrieved as part of the practice-led research and is obtained under conditions of 'live' classes. Observation method allowed body language of students to be viewed during the class. Finally the student survey was used as it is module specific and provides an overall outcome of the module.

### *Design and process*

Flipped jigsaw practice was implemented at the end of week 2 as homework activity (Figure 1). There can be (were) between 4-6 groups.

In class (Stage 1): Divide the students into groups of 3-4s (known as the homework group). Each homework group is asked to explore the topic of the week through sources (journal articles, books, etc). Members in each homework group must read the same piece of work, but different from other homework groups. Lecturer provides instruction for notes to be made and brought to next class session.

Outside class (Stage 2) : The homework reading is completed individually away from class. Students to make notes on key points on their piece of work.

Back in Class (Stage 3) : Returning to the class students will compare the notes within their homework group/s. No more than 10 minutes allocated for this part of the task. The homework group members (now experts) will then split and join new group/s (the aim is to ensure that no two members are permitted to be together in the new group/s).

Stage 4 - Within their split groups, each member will share knowledge of their piece of work (e.g journal article etc) and vice versa. Once the knowledge is shared a deeper discussion can take place (further evaluation/ critique/ debate/ additional contribution from students) (15 mins for this task).

Stage 5 - Having completed point 4 above the expert student will then move to another new group and repeat the process until all members have been subjected to others' expertise for the reading.

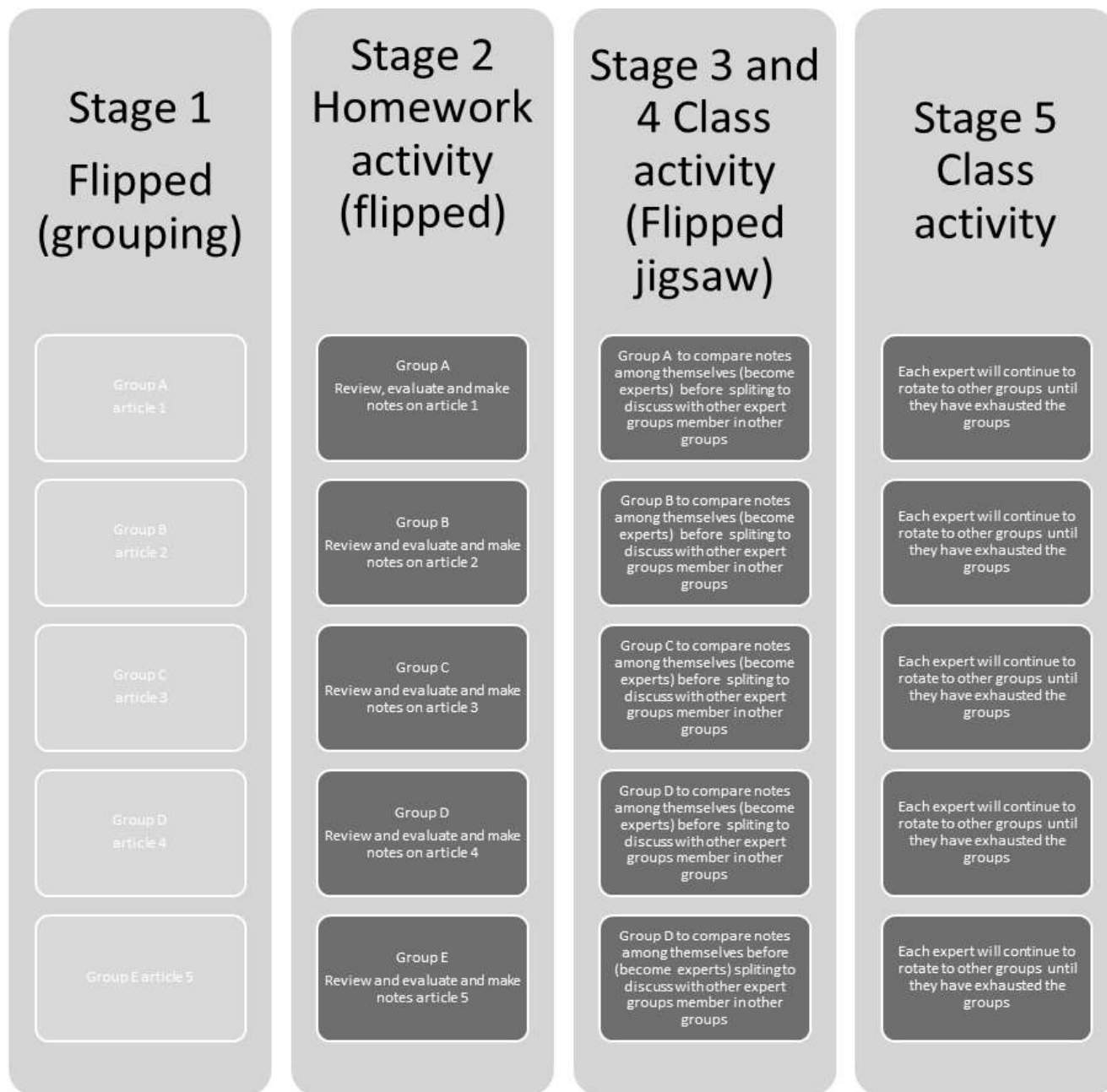


Figure 1. Flow of flipped jigsaw activity

## Findings

The findings from the study are shown in table below:

Stages	Design	Facilitator / lecturer	Student quotes	Findings
Stage 1	Division of students in homework groups. Students instructed to read the article (selected by lecturer or sourced themselves)	Observation	<i>'I find journal articles confusing and intense'</i> <i>'Its hard to understand what it meant because I can't understand the academic style and words used'</i> <i>'Journal article are so long and put me of</i>	Students emphasised difficulty in academic reading highlighting that academic terminology was challenging and problematic for some of them.
Stage 2	Flipped strategy Students to review and evaluate material and make notes to bring back to class	Send out reminders to complete homework for next session		
Stage 3	Reconnecting with the homework group (now experts)	How did you find the homework task?	<i>'it's good because what I didn't understand when I was reading alone was made clear when we were discussing the paper now.'</i> <i>'I read it made some notes but the discussion in the homework group allowed me to question and get answers from others.'</i> <i>'listening to others and the way they discussed helped me to think of what I missed out in my reading of the paper.'</i> <i>'I feel I learnt something'</i> <i>'they didn't do the reading and it was just us two'</i> <i>'didn't get a chance to complete the reading'</i>	The majority of the students made evident that they had evaluated the reading made notes. They appeared ready and confident to engage in the next step of the pedagogy It was evident that collaboration in discussing the article enhanced knowledge acquisition. Evidence of team-work and relationship building. Good evidence of reflection of learning Despite some members not completing the homework task- advantage was gained for the non-reader due to being part of a homework group More confidence in delivering the paper to other expert group members. Reiteration appeared to lead to knowledge enhancement retention. Non-readers felt almost guilty that they had not completed share of the work (this would discourage lack of participation in the future). However, they still gained as they took notes during delivery of material and contributes to the discussion.
	Joining experts in other groups	Observation		

Stages	Design	Facilitator / lecturer	Student quotes	Findings
Stage 4	Flipped jigsaw working with expert student groups	How did you find the flipped jigsaw task?	<p><i>'it was easier because I have already talked about it.'</i></p> <p><i>'My understanding of the content was getting better'</i></p> <p><i>'It was good interacting with the others'</i></p> <p><i>'I like the fact that we moved around the class'</i></p>	<p>Finding suggested that students had become more comfortable in discussing the topic of their paper as they rotated to different groups</p> <p>Each rotation provided further consolidation, and gaps identified in their self-reflection.</p>
Stage 5	Rotation of experts	How did you find this activity? And Lecturer Observation	<p><i>'I become more confident the more I talked about it'</i></p> <p><i>'I had more understanding of the study the more I told the others':</i></p> <p><i>'I can remember the key points without reading it now'</i></p> <p><i>'I seemed to pick out something about my own article from the fact that someone else alerted me to it when they were discussing their own, for example I didn't pay much attention to the sample characteristics and when someone spoke about their sample I looked more closing at the sample characteristics in my article'</i></p> <p><i>'I came to class with knowledge of one article and am leaving with 4-5'</i></p> <p><i>'I made notes on the talk of other students' articles, more to include in my exam if the topic comes up.'</i></p> <p><i>'I understand how to review and evaluate better'</i></p> <p><i>'It keeps us engaged and its enjoyable'</i></p> <p><i>'I could bring in stuff about businesses in my countries and put it in the context of the topic discussed'</i></p> <p><i>'it's good because we come with knowledge on one piece of work but leave with more'. Furthermore, 'the debating of the topic was good because we saw different perspectives of the same concepts and their applications in different countries and businesses'.</i></p>	<p>The five stage process of 'Flipping the Jigsaw' combines the individual learning task to cooperative learning by the sharing of knowledge between members.</p> <p>Extended teambuilding, debating, strengthening of discussions around the topic a deeper understanding,</p> <p>Critical and logical thinking</p> <p>Further questioning that allowed more probing into the topic.</p>
End of the session feedback	Verbal feedback	How did you find this learning task?  What type of impact did this task have on your learning?		<p>It was clear that the activity was engaging.</p> <p>Students appeared to have retained the knowledge by repetition of it.</p> <p>They were able debate and discuss to quite some depth.</p> <p>It was clear that some of the students were bringing in examples of entrepreneurship topics from their own countries and this way engaging and at the same time demonstrating cross-cultural learning – groups members found this interesting as they were bringing in real life examples (of home countries, family and friends)</p> <p>It was evident that students were learning more in one single session than they may have learnt just reading the homework article and then been lecture and discussion session in class.</p> <p>When asking students to summarise as a class it was clearly evident that they had gained and at the point retained a good knowledge of the topic of the week.</p>

*Table 1. Findings from classroom session (Theory of Entrepreneurship)*

The five stage process of 'Flipped Jigsaw' combines the individual learning task to cooperative learning by the sharing of knowledge between members. The 'flipped' is played out when providing homework (reading) the topic of the week and review for homework with notes on the evaluation of the reading. These notes are shared in returning to the class with initially the homework group who have completed the same reading. The Jigsaw (flipped) strategy takes action from stage 3 (and continues to stage 5) with further splitting of the homework group members (now experts on their reading) joining new groups members who are also experts of their reading. The process continues until all the reading is shared and discussed. The lecturer's role was that to facilitate and answer any questions that the students may have, as well as provide 'trigger' questions if the discussion was starting to lessen and provide feedback and feedforward (at the end of the session an overall summary was provided for the selected topic of the week).

The findings suggested that despite the difficulty for some students in comprehending the literature initially during the homework task (flipped element), making the notes prior to discuss in class appeared less pressuring task as students were aware that this would be shared with homework group members only (and if anything was missed gaps will be filled in from the homework group) and not the lecturer. The jigsaw strategy (in this case applied to the splitting of the overall theme through the selected readings) provided the opportunity of not just delivering the evaluation of the paper selected, but the opportunity to critique and analyse in more depth. Students also come with personal knowledge and when observing the groups interacting and discussing, it was apparent that relevant cultural and background knowledge was brought into discussions in terms of real-life scenarios. With each rotation expert member knowledge was being consolidated. At the end of the semester the student satisfaction increased from 70% to 86% for the module where students found the module 'intellectually stimulating and engaging'.

### *Discussion*

Enterprise and Entrepreneurship is delivered in a variety of ways and the QAA has made distinctions with 'About, For and Through' entrepreneurship. Hav-

ing focused on the ‘About’ entrepreneurship which aims at ‘knowledge acquisition through the study of the topic’ (QAA 2018) and elements of skills from Entre-Comp (Competencies) framework (2016) this section discusses the adoption of flipped jigsaw pedagogy in enterprise and entrepreneurship education. The findings (observational and questioning by the facilitator) demonstrated that value was added to students’ cognitive learning, critical thinking and evaluation skills. Other skills included both individual and group responsibility therefore, developing self-management and task management skills. Expert group members highlighted focused mastery of the knowledge and this allowed debating skills to be enhanced in discussions. The cooperative activity further allowed enriching relationships between the students therefore contributing to team building skills. The flipped jigsaw also allowed peer-led sessions to create shared learning experience. The added advantage was that all students were involved. Culturally and racially diverse groups benefited from sharing knowledge especially country-specific (Adams, 2013). It was very much evident that whilst the learning was taking place students engaged with multiple skillset. The flipped jigsaw was not without challenges, the less motivated and less engaged students required more monitoring and attention ensuring that they were not left behind in the acquisition of knowledge and competences. The lecturer’s role was to be cognisant and address the signs of disengagement.

The pedagogy allowed lecturer-student time to be increased, therefore optimising time and space. Learning had become central in the session rather than just delivery of content through lecturer-led. The session provided an opportunity for the facilitator to give formative on-going feedback and feedforward. The lecturer also observed a boost in student self-esteem. Students had the opportunity to reflect on their own learning and raise any questions.

The philosophy behind this pedagogy is to aim to provide the opportunity for students to gain expertise over a topic, whilst being subjected to others’ expertise through cooperative learning. Furthermore, the opportunity to develop and enhance additional skills, such as critical thinking, evaluating, debating, team building and time management, all of which become part of the overall learning. Findings demonstrated that the flipped jigsaw did contribute to academic improvement as well as competences.



### *Limitations and Further Research*

This study has not been without limitations. In terms of methodological limitations the sample size was small - up to 25 students, this is purely as entrepreneurship numbers are small compared to business admin or management courses. The practice-based and action research element of the study was problematic in terms of recording the narratives during the sessions as active facilitation was an important part of the pedagogy. In terms of student engagement very few were disengaged as a result of not doing the homework. It is vital that for this teaching method everybody is encouraged to do their part of the task. For future research it is recommended that the flipped jigsaw is adjusted for online teaching.

### *Conclusion*

Entrepreneurship Education's importance and necessity in the context of individual, societal and economic development has continued to have policy implications, and therefore has driven demand for entrepreneurship education. The past decades have witnessed an increasing number of students entering business schools and enrolling on business and entrepreneurship courses. The demand comes from both national and international markets. With the diversity of students entering the higher education sector, universities have faced pressure in terms of ensuring student engagement and satisfaction, therefore the importance of innovative and creative teaching styles have become even more significant in responding to learners' needs. The UK's Educational policy guidelines (QAA, 2018) place emphasis on being 'responsive' to the learners' needs, especially taking into account the diverse student clientele. In keeping with creative and innovative ways of teaching and learning - the focus of this study has been to address the learning needs of entrepreneurship students at Coventry University in the International Centre for Transformational Entrepreneurship in the context of theory-based learning. This study has advocated a teaching pedagogy for content-based modules in order to optimise on content, time, and space. 'Flipped Jigsaw' pedagogy has yielded interesting outcomes, especially learning dynamics and would do well to be applied across other disciplines. Overall findings demonstrated (through observational research, open-ended questions and narratives) the development and

enhancement a range of skills: critical thinking and evaluation, problem solving (in some cases), team building, time management, discussion and debating. The strategy has been adopted over the past three years with a positive impact on student satisfaction for the module (increasing 100% range in the past three years).

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