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Based tasks in CLIL settings

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Abstract

The article is devoted to advanced learners' motivation within content and language integrated learning (CLIL) settings. The author analyses students' motivation and anxiety for a task from the point of the dopamine and the opioid systems, the input–output aspect, heuristic and algorithmic procedures. Considering scientific publications reviewed, the author demonstrates a novel idea for CLIL settings—professionally-oriented incident-based tasks. An example of an incident-based task for Master's students majoring in management is given. Being based on the same principles, the novel tasks proposed are relevant to CLIL. The author concludes that the incident-based tasks not only stimulate experienced students' motivation, but also contribute to their personal qualities and professional skills development.

Keywords: CLIL, professionally-oriented, professional discourse, internet-based, foreign language competence.

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1. Introduction

According to current Russian Federal Educational Standards, future Masters of Sciences are to be ready for intercultural communication and be competent enough to solve professional problems in a foreign language of their choice. This requirement calls for innovation in the sphere of education to help students' simultaneously master professional content and level of language proficiency. Therefore, content and language integrated learning (CLIL) becomes relevant to the educational context concerned.

Requiring applied knowledge, CLIL is a key to a more advanced and sophisticated level of expertise. Even setting greater challenges to teachers by its purpose-designed tasks, CLIL, nevertheless, is becoming more and more popular, since it is based on a 'two-for-the-price-of-one' idea (Bruton, 2013, p. 588), which is especially relevant within the nowadays limited number of in-class hours.

For students, a CLIL class is definitely more complicated than any traditional learning, because it requires cognitive flexibility, involvement and constant focus. According to researchers, success of CLIL settings is dependent on such students' qualities, as 'prior achievements, general cognitive abilities, motivation' (Dallinger, Johnmann, Hollm & Fiege, 2016, p. 23). We suppose that those students, who have the characteristics mentioned, are not only 'able to deal with more difficult tasks' (Roussel, Joulia, Tricot & Sweller, 2017, p. 3), but can also become even more motivated and skilled by the cognitive load they are exposed to.

Motivation is a key component for language learning, especially when it is a CLIL class for experienced Master's students with high level of language proficiency and expertise in the field of their major. Even considering the fact that CLIL replaces students' bad attitude to any of the disciplines included in a CLIL setting with 'a feel good attitude' (Marsh, 2000, cited in Chostelidou & Griva, 2014, p. 2170), motivation and anxiety factors should nevertheless be taken into special account.

Investigations prove that there are two types of motivation—intrinsic and extrinsic or integrative and instrumental depending on the origins (Coyle, Hood & Marsh, 2010). This raises such questions as: what does the type of motivation depend on? Which type is preferable? What is a necessary prerequisite for either extrinsic or intrinsic motivation?

For example, decades ago when computers and the Internet were less widespread and rarely used in education, a computer-based task stimulated motivation. Nowadays, computers and the Internet are considered ordinary tools and cannot boost students' motivation and anxiety. Thus, in terms of an internet-based task more attention should be paid to the task itself—its major idea, content included and design. To accomplish this, the nature of motivation is to be analysed and considered.

2. Theoretical framework

2.1. The task design theories

Daniel Pink analysed types of work people do and the way they accomplish tasks. He found out that nowadays 70% of developing countries' populations prefer working heuristically—doing work without set procedures. He concluded that in terms of heuristic work people are motivated intrinsically by the work itself. In this case, they do not need additional algorithm, punishments, control and rewards that are typical for algorithmic work and extrinsic motivation (Pink, 2009). Therefore, we can suppose that a task can be a reward itself. Thus, in order to motivate students intrinsically, the only thing a CLIL teacher should do is to create a proper task, which is certainly a hard challenge to face.

It is believed that when trying to influence someone's actions or behaviour, it is rational to provide autonomy (Fryer & Bovee, 2016) or/and suggest types or forms of work that are interesting for a person (Weinschenk, 2011) depending on his or her aspirations. Thus, the task and materials it is based on should relate to students' emotional intelligence and stimulate anxiety and motivation by

giving a chance for the students to demonstrate their knowledge. In this regard, professionally-oriented CLIL tasks can motivate students naturally by containing professionally-oriented content and requiring professionally-oriented actions (applying knowledge, experience, theory, etc.).

Design and idea of a task can be better understood and evaluated with the help of the dopamine system. Dopamine has always been considered to be responsible for 'the pleasure system of the brain', however, according to scientists, dopamine is closely linked to the anxiety (Weinschenk, 2011, p. 121). Researchers state that there are two systems responsible for our actions—the dopamine system and the opioid system. The dopamine system is crucial for a number of brain functions, for example: thinking, mood, motivation, wanting, seeking and reward, whereas the opioid system is related to positive feelings experienced when the goal has been achieved (Berridge & Robinson, 1998).

The research analysed proves that the dopamine system has greater impact on a person due to its long-lasting effect, as dopamine is created during goal-oriented search and willingness to get reward, not necessarily a monetary one or an excellent mark; this reward can be, for instance, some data one has been looking for. It is believed that in the case of information search, the creation of dopamine is also stimulated by the unpredictability. That is why, according to neuroscientists, to set off students' dopamine system, it is recommended to create short texts and messages that do not contain all the data needed to understand the whole picture, because this situation requires additional search and gives a cue that something is going to happen (Weinschenk, 2011). The amount of data that does not satisfy the desire for the information stimulates the anticipation of some actions or rewards, and therefore sends the dopamine system raging. Considering everything mentioned, a proper task to motivate students:

- can be accomplished heuristically and should not necessarily have a set algorithm of actions or a strict order;
- should be interesting for the target audience;
- should stimulate the dopamine system by requiring additional search;
- should stimulate the opioid system by satisfying the search carried out.

2.2. The language comprehensible input

According to CLIL researchers, when designing a task it's important to consider 'how the students meet the content', 'what they do while learning it' and later 'how understanding is expressed' (Coyle et al, 2010, p. 87). One cannot argue that the Internet is the most valuable source of information, as it contains data relevant to different issues, either current or old ones. Having found the data needed, the teacher faces the challenge of selecting, combining and modifying it to expose his or her students to the topic of the study. When working with advanced learners, a CLIL teacher is to consider students' knowledge and experience to mediate their engagement, in other words, the so-called input-output aspect.

On one hand, it's worth mentioning Swain's idea about the importance of the language competence level students demonstrate, as it shows their understanding (Swain, 1996), but, on the other hand, since Master's students are experienced learners, who in most cases believe their level of language proficiency (B2-C1) is already enough for a successful career, the language comprehensible input (Krashen, 1981) cannot be ignored. Krashen believed that the tasks should be based on the language above the current level of language proficiency, which is also our standpoint, because it corresponds with the idea that perfection or mastery, that cannot be reached, but approached, is the most powerful motivator (Pink, 2009).

3. Incident-based tasks in CLIL settings

Taking everything mentioned above into account, we have developed and successfully implemented a computer-based method, called *the Incident*. Being one of the types of situation analyses technology, *the Incident* nevertheless differs from role-playing or case-study dramatically. Compared with the case-study, *the Incident* does not include detailed information on the issue under analysis. Since our target audience is Master's students majoring in management, we have developed incidents based on the students' professionally-oriented content.

The students receive a short coherent text; in our case, a concise history of a company that went bankrupt or had some problems with the law. In order to boost students' anxiety, the text should not include any information on the reasons of the company's failure. For better understanding of the idea, one of the incident-based tasks represented in the Unit *Business Ethics* in our textbook *Content and Language Mastering for Management Students* is given below:

Incident: Snow Brand Milk Products Co. Ltd is a Japanese dairy foods manufacturer established in 1925. Company's corporate culture and main objective—to produce only high quality products, brought it on top, so that by 1990, Snow Brand had gained respect and trust of its consumers and become Japanese largest dairy products manufacturer. Late June 2000, the shock in Japan was bad enough, as large numbers of people (nearly 15,000) suddenly came down with food poisoning after consuming milk or related products manufactured by Snow Brand. The consequences for Snow Brand were dramatic and awful. Sales for the company plummeted as consumer confidence evaporated. The company was pushed to close five of its factories. Snow Brand had enjoyed a market share of around 45% before the incident. In the immediate aftermath, it plunged into single figures. In 2002, police raided the headquarters of Snow Brand in order to collect evidence. Later, two Snow Brand senior managers were convicted, and given suspended sentences.

Task 1: Think about possible reasons for Snow Brand disaster. Do you think there could be other reasons for suspense and legal search besides food poisoning?

Task 2: Use the following links to find additional information on Snow Brand issue:

1. 'Snow low-fat milk makes over 1,500 sick in Kansai'
<http://www.japantimes.co.jp/news/2000/07/01/news/snow-low-fat-milk-makes-over-1500-sick-in-kansai/#.V6nJSNSLSt9>
2. 'Snow Brand scandal grows' <http://www.japantimes.co.jp/news/2000/07/09/national/snow-brand-scandal-grows/#.V6nJXNSLSt->
3. 'Snow Brand to dispute link to death'
<http://www.japantimes.co.jp/news/2001/12/13/news/snow-brand-to-dispute-link-to-death/#.V6nJV9SLSt9>
4. 'Brand PR failures: Snow Brand milk products' <http://brandfailures.blogspot.ru/2006/12/brand-pr-failures-snow-brand-milk.html>

Task 3: Be ready to discuss the issue. What should have the Snow Brand management done in order to avoid conviction or get mitigation? List the actions, you feel, the management should have taken. Give arguments!

Incident-based tasks correspond with the conclusions, we have drawn, based on the scientific research on task design analysed as:

1. They can be accomplished heuristically due to the following aspects:
 - it's not necessary to follow the links order given in the task to get the information needed;
 - being experienced learners, Master's students can either scan the articles or read for gist;
 - if interested students can use the autonomy provided and find any additional information themselves.
2. The content included is interesting for the teacher's target audience:
 - the content is real and shows real examples of executives' flawed actions or inactions, bad strategy, etc. This fact stimulates students' attention to details, helps them 'walk in someone's shoes', learn from someone's mistakes or demonstrate own experience and knowledge;
3. Incident-based tasks do stimulate the dopamine system, because:
 - they stimulate such brain functions as: thinking, mood, motivation, wanting and seeking;
 - they are aimed at gaining reward and, therefore, boost students' desire for the information needed;
4. Incident-based tasks do stimulate the opioid system, because:
 - the search carried out will bring results and, therefore, satisfy the desire for the information;
 - the search carried out will help students demonstrate their competence in the field of their major and, thus, assist their self-affirmation.

The Incident method is relevant to CLIL as it is built on the same key principles (Coyle et al., 2010, p. 42):

1. *Content matter is not only about acquiring knowledge and skills, but it is also about the learner creating their own knowledge and understanding and developing skills*—incident-based tasks teach students how to collect and analyse the information, choose the data relevant to the issue and ignore some unimportant facts. Working with incidents means rational data search and its further implementation to dwell upon the matter, therefore, using the target language 'for knowledge construction' (Dalton-Puffer, 2007, p. 65).
2. *Content is related to learning and thinking. To enable the learner to create own interpretation of content...*—the fact that the incident is real allows students to learn from someone's mistakes, draw conclusions, imagine themselves experts and apply theoretical knowledge to practise.
3. *Thinking processes (cognition) need to be analysed for their linguistic demands*—Considered from the point of Bloom's taxonomy (Anderson & Krathwohl, 2001), incident-based tasks are complex and require lower-order and higher-order processing, in other words, more mental effort.
4. *Language needs to be learned which is related to the learning context, to learning through that language, to reconstruct the content and to relate cognitive process...*—the 'Incident' helps students to improve their level of foreign language proficiency, as it is based on real articles and requires reading, vocabulary acquisition and its later cognitive implementation when writing an essay on the matter or discussing the incident in class, thus, the input-output aspect is demanding.
5. *Interaction in the learning context is fundamental to learning...*—incident-based tasks are complex and require in-class and out-of-class settings. In-class setting is devoted to pair or group work on the matter, which puts interaction at the core.
6. *...Intercultural awareness is fundamental to CLIL*—in order to correspond with this principle, incident-based tasks are to be based on situations that took place abroad. The incident represented in the article is devoted to a Japanese company. When working with the task, students get to know particular details of the country's regulations, law, national mentality, etc.
7. *CLIL is embedded in the wider educational context... and, therefore, must take account of contextual variables...*—the idea of the task can be applied when working with students of different majors, for example, we have also developed such tasks for Master's students majoring in Civil Engineering, and the tasks proved their efficiency. It's crucial to note, that incident-based tasks should be used when working with experienced students, preferably with Master's students, who are able to manage the cognitive load, process the information and ready to demonstrate their expertise. Otherwise, students will need 'well-designed pedagogical support' (Gablasova, 2014, p. 978).

4. Experiment

To check incident-based tasks efficiency and evaluate students' motivation and anxiety, some pedagogical experiments were conducted. We hypothesised that incident-based tasks would stimulate experienced learners' motivation. Since we usually work with small groups (7–12 students), to get valid results there were several experimental groups and several control groups. All students were Master's students majoring in management with the level of language proficiency B2-C1, aged 20–21. The total number of students in the experimental group and control group was 75 and 68, respectively.

Incident-based tasks were included when working with the experimental groups. The processing plan of the work with the incident-based tasks was as follows:

1. the students read a short text on the issue considered (in-class setting; reading);
2. the students thought about possible reasons for the company's problems or failures, bankruptcy (in-class setting; pair or group work, discussion);
3. the students followed the links that contained information and read real articles on that matter to find out the details (out-of-class setting; reading);
4. the students thought about the ways the company could have avoided or managed the problems (out-of-class setting; writing);
5. the students demonstrated professional knowledge and shared their ideas on the matter (in-class setting; discussion).

The students of the control groups were to read a long summary (around 1,000–1,200 words) of the situation. Their texts contained all the information to understand the whole picture, which was later discussed. To evaluate students' motivation and anxiety, we observed the working process and polled the students of the control and experimental groups.

4.1. Our observations

Regardless of the level of language proficiency, there are always students who are either shy or simply reluctant to get involved in communication or any activity. Our observations showed that incident-based tasks caught all students' attention, because they were eager to find out the details. Moreover, some students who preferred to keep silent during the first part of the task were active during final discussions, as they wanted to show their expertise and professional experience. As for the control groups, no particular difference in the level of their motivation was recorded.

4.2. Surveys

To evaluate students' motivation, general self-assessment and opinion on the work, a survey was conducted. The students of the experimental and control groups were to rank the statement (Table 1), where 1 was the lowest result. We calculated the arithmetic mean using the formulae shown in Figure 1.

$$\bar{x} = \frac{1}{n} \sum_{i=1}^k x_i \cdot n_i = \frac{x_1 \cdot n_1 + x_2 \cdot n_2 + \dots + x_k \cdot n_k}{n}$$

Figure 1. The arithmetic mean calculation formulae

The results obtained are shown in Table 1.

Table 1. The sample mean of the experimental and control groups surveys

Statements	Ranking	Experimental group N = 75 (arithmetic mean)	Control group N = 68 (arithmetic mean)
1. The information caught my attention immediately.	1 2 3	2.65	1.07
2. The task itself was interesting and unusual	1 2 3	2.56	1.34
3. The information was relevant to my major	1 2 3	2.53	2.47
4. The task helped me improve my level of language proficiency	1 2 3	2.91	2.71
5. The task helped me improve my level of professional expertise	1 2 3	2.04	1.88
6. When reading I was eager to find out what had happened	1 2 3	2.89	1.16
7. I enjoyed the group discussion after the reading	1 2 3	2.49	2.35
8. The task allowed me to demonstrate my professional knowledge and apply theory to practise	1 2 3	2.52	2.43
9. I will remember this situation	1 2 3	2.93	1.16
10. I would like to work with similar tasks in the future	1 2 3	2.95	1.96
Total average		2.647	1.853

4.3. The results analysis

Statements 1, 2, 6, 9 and 10 results indicate that incident-based tasks, even being based on the same information, outperform ordinary texts in terms of students' motivation and anxiety stimulation. The statements aimed at content and language showings (3, 4, 5 and 8) represent the fact that both variants are more or less equal, with a bit better results of the incident-based tasks. Statement 7 results demonstrate that both groups enjoyed the final discussion on the matter; however, the showing of the experimental group is higher. We suppose that the reason for this result is connected with the fact that the students of the experimental group had more autonomy and experienced more responsibility while completing the task, since they were to find the relevant information themselves.

5. Conclusion

The aim of this article was to demonstrate a novel task idea, which is relevant to CLIL. The dopamine and the opioid systems matters, as well as, CLIL theories considered helped develop a novel task design, which proved its efficiency. The research shows that incident-based tasks have great potential in educational context, because they stimulate students' motivation and anxiety not only by real situations they are based on, but also by the goal-oriented search required. Representing professional and student-centred content, incident-based tasks contribute to students' professional skills development. Incident-based tasks can be applied in blended learning and e-learning, if modified accordingly.

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