Abstract: As there are contradictions in the digital technology: 1) a tool for professional growth and 2) a tool for imposing a prepared scenario of achieving success on the subject, ignoring the principle of environmental compliance, our study aims to substantiate and experimentally test the effectiveness of the model of realization of modern student’s mental experience (factor in activating his systemic thinking and teleological competence). Moreover, the technology of programming as philosophizing in the BSL format is considered to be an element in the humanization of geeks culture in the situation of supposed technological singularity. In accordance with the goal, we have created a regression-correlation design for the study of the influence of the predictor variable (BSL) on the criterion variable (disclosure of mental experience). The conceptual idea of the author's model ‘Flipped Class’ is self-learning as creativity, which is realized in the didactics of performative action. The results of the tasks have revealed the relationships and differences in the implementation of indicators of students’ mental experience of joint e-Learning and BSL, which are visualized in correlation galaxies for future clustering. They have confirmed the leading idea of our study: the disclosure of the resources inherent in human nature in the process of learning is the way for the relentless cognition of the sense of placement with a view to achieving dignity and making free choices in life.

Keywords: bite-sized learning, mental-spatial concept, course design, didactics of performative action.

Introduction

For many e-Learning specialists, bite-sized approach is the right choice, because it:
• improves psychological engagement of learners;
• helps to prevent the burnout;
• stimulates learners to process information accurately and thoughtfully;
• increases appeal to a millennial learner by 71%!

So, by introducing the approach to the bite-sized learning, we express the openness for the more modern alterations that have the potentiality to form our students’ future.

But the whole goal of this efficient educational approach can be wasted if the given examples and contexts are too abstractive or remote from the student's environment. Therefore, to enable students to make the most of an innovative approach to learning, the lessons should be placed in appropriate scenarios and contexts (Yates et al., 2020).

Research Problem

The introduction of bite-sized learning (BSL) format in modern professional education involves the construction of an individual learning trajectory for each student. It is not simply a matter of individualization, which is carried out in the framework of teamwork, joint tasks and learning content. Recent didactic research (Filatova, 2015; Avramenko, 2020) reveals the potential for not only personalization, but also the personification of education, in which the key figure is a student who makes an independent conscious choice of goals and means of learning. His cognitive system – a system of individual intellectual resources, or mental experience – monitors the performance of tasks (in terms of compliance of actual efficiency with the expected) and includes control mechanisms aimed at minimizing possible differences. This interpretation draws attention to a key regularity that is not usually addressed in the resource approach: mental experience sets not only the upper but also the lower limit of the effectiveness of a person’s cognitive attitude to the world – on the principle – not Equality, but Equity (Gray, 2015). This has accounted for the peculiarities and nature of the reproduction of the content of the educational process in the individual consciousness.
Research Focus

To understand how to attract and engage your students in the context of hybridization of the educational process, you need to start thinking about how they are and what to do to provide them with a sense of their own identity, guessing (anticipating) their needs. However, it is extremely difficult for e-learning professionals to succeed if they do not have a basic understanding of what mental experience is, how this system works, and how to help a student implement it effectively.

Works (Osorina, 2017; Oakley et al., 2008; Shadrikova, 2007; Volkova, 2015) are devoted to the question of realization of mental experience in the context of intellectual potential of the person. According to these studies, mental experience includes:

- cognitive mental structures that enable implementation of 1) convergent ability (structural, combinatorial and procedural skills); 2) creativity (speed, originality, receptivity, metaphor); 3) ability to learn (implicit, explicit); 4) cognitive styles (among them – field independence, reflexivity, range width equivalence, cognitive complexity, abstract conceptualization and imaginative tolerance, ways of coding "archetypal" and semantic structures of the semantic sphere of the person);
- cognitive mental structures that provide the perception, storage and ordering of information; help to reproduce the stable aspects of subject’s environment in his psyche (archetypal engrams, methods and schemes of their euphoria in the information field);
- metacognitive mental structures, which are responsible for involuntary and arbitrary self-regulation of the information transforming process; designed to control the state of individual intellectual resources, to correct intellectual activity (involuntary and arbitrary intellectual control, metacognitive awareness, open cognitive position);
- intentional (motivational) mental structures, which are the basis of individual selectivity of intellectual activity and participate in the formation of subjective criteria for choosing a particular subject area, the direction of finding solutions, sources of receiving and forms of information processing (beliefs and attitudes).

To uncover the student's mental resources, especially in the current emergency, researchers have shown the effectiveness of collaborative learning (Bozkurt, 2020; Chen et al., 2018; Cui and Zheng, 2018; Riggs, 2020), given that the student's sense of isolation is one of the recognized problems of e-learning (Mbukusa et al., 2017).
Factors for the implementation of these resources are: scaffolding strategies (Rebecca Alber; Jennifer Davis; Bowman-Meghan Laslocky), assessment distance learning and feedback (Torrissi-Steele, 2020).

According to researchers, procedural scaffolds help students use the instruments and resources accessible to them, and conceptual scaffolds facilitate to prioritize key concepts. Strategic scaffolds encourage students to use alternate strategies for solving the problems. Instructional scaffolding is an interactive and mutual process between student and teacher, and in the context of distance learning it may include educational multidemonstrations; glossaries; auxiliary tips; headings; references to additional resources and exemplary task performance models (Delen et al., 2014). Some online courses release instructional materials according to the student’s level (Lang, 2020). Metacognitive scaffolds guide mental processes, the development of self-regulation and self-assessment of metacognition of future professionals (Doo et al., 2020; Kim et al., 2019).

However, the authors of these studies focus exclusively on the development of thinking and cognitive activity of the student (his ability to operate with external and/or internal models of the problem situation in the context of classical offline education). Not only spiritual and phenomenological degrees of personal cognition and typology of intellect (Gardner, 2015), but also the experience of emotional, semantic (semasiological) reflection, valuable-motivational, operational and communicative experience, the experience of habitual activism have been left out of consideration. It doesn't just dissonant with the post-classical paradigm of education (focused on the individual-unique person in the space of "opposition without opposition"), but also justifies the "expediency" of gamification, the so-called “A creator” who seeks to bridge the gap between himself and the computer in the form of so-called combined creativity (Guzdial & Riedl, 2019) the “advantages” of which are considered to be a bricolage “design”, “clustering” of world perception.

**Purpose of the Study and Research Questions**

Thus, the purpose of our study is to substantiate and experimentally test the effectiveness of the model of realization of modern student’s mental experience in the BSL format. In accordance with the goal, we have created a regression-correlation design for the study of the influence of the predictor variable (BSL) on the criterion variable (disclosure of mental experience).
Research methodology

The choice of the confirmatory methodology of the conducted experimental research was conditioned by the content of the author's model of bite sized approbation, the conceptual idea of which was self-learning as creativity.

![Diagram of the author's model for self-learning as creativity]

The essence of the proposed model of performative didactics determines the interdependence between the phylogenetically underutilized human cognitive activity in the interrogation of truth and the level of realization of the person’s ability to do that. The effect of this pattern is determined by the principles:

- realization of the freedom of choice of the individual educational trajectory;
- spiral-concentric search for epistemological landmarks;
- creative dialogue interaction;
- contemplation as spiritual improvement;
- improvisation as a way of unexpected and transformative organization of the learning process;
- paradoxicality as a conflict between the theoretical substantiation and the ontological existence of the modeled subject essence;
- intonation nature of human consciousness;
- eidetic and phenomenological reduction of value comprehension of educational content;
- orientation of the format of educational content on a given result and a clearly defined target audience;
- implementation of the facet approach in contextual learning as a performative act. (Romanova et al., 2020).

As a research hypothesis, we offer the expected result of the implementation of the modern student’s mental experience (Table 1):

<table>
<thead>
<tr>
<th>Characteristics of the person/situation</th>
<th>Ability to transform the educational situation</th>
<th>Task</th>
<th>Problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>A ← creation</td>
<td></td>
<td>P</td>
</tr>
</tbody>
</table>

Fig. 1. The author’s model for self-learning as creativity

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## Table 1. The expected result of the implementation of modern student’s mental experience

<table>
<thead>
<tr>
<th>Components of mental experience</th>
<th>Experience resources</th>
<th>Techniques for its implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive experience</td>
<td>1. Ability to focus on relevant situations and, at the same time, to ignore irrelevant ones.</td>
<td>– technique «Fishbone»; – technique «Creating a cluster»</td>
</tr>
<tr>
<td></td>
<td>2. Ability to use different methods of description and epistemological (allegorical, tropological and eschatological) analysis of phenomena</td>
<td>– creation of a reference scheme (collage) of the educational task</td>
</tr>
<tr>
<td></td>
<td>3. Ability to differentiate the text and determine its essential meaning</td>
<td>use of mental maps: – spatial images – graphical systematizers (hierarchies, networks, matrices, block diagrams)</td>
</tr>
<tr>
<td></td>
<td>4. Ability to plan own intellectual activity (its purpose and stages of implementation)</td>
<td>– strategies “I know, I want to know, I have learned in the process of work”; – creation of “Self-diagnostic notes” (Self Diagnostic learning logs)</td>
</tr>
<tr>
<td>Metacognitive experience</td>
<td>1. Ability to identify and formulate a range of questions on the subject of research</td>
<td>– questioning strategy «OIS»; – strategies for asking questions «KIAASE»</td>
</tr>
<tr>
<td></td>
<td>2. Ability to formulate and substantiate hypotheses</td>
<td>– data interpretation strategy</td>
</tr>
<tr>
<td></td>
<td>3. Ability to use erothematic methods, techniques of elentics, heuristics, synectics</td>
<td>– work with “conceptual schemes”</td>
</tr>
<tr>
<td>Intentional experience</td>
<td>1. Ability to aporia and disjunctive synthesis</td>
<td>– participation in cross-discussion</td>
</tr>
<tr>
<td></td>
<td>2. Initiating a coach and co-learning environment</td>
<td>– discussion “joint search”; – strategy “design act”</td>
</tr>
</tbody>
</table>
The model of realization of modern student’s mental experience in the BSL process was experimentally tested during the teaching of the course of pedagogical anthropology for future psychologists.

One training cycle lasted 16 weeks (4 modules). However, in the control group, training was conducted according to the traditional style of joint e-Learning (see Fig. 2), and in the experimental group – bite-sized teaching was used (see Fig. 3). In the traditional design of the course, each module provided a sequence: introductory topic → lecture (one hour) → one hour of training exercises → one hour of practical tasks and, finally, summarizing. In the bite-sized course design, one module included three mini-lectures of 15-20 minutes each, a series of practical assignments in a virtual Error Lab and a final project. Tools were used to build the training programs: LMS and our own development – the learning management system Learn.

Fig. 2. Usual educational course design
The teacher-manager, activating her charisma, implemented the curriculum of the course on social platforms, transforming the tasks to the student's request. She used the detection strategies of the individual zone of proximal development (ZPD) of each learner – the so-called personification strategies (Eileen Raymond) and the corresponding humanitarian technologies of virtual reality using special software (such as CMS, LMS, SpringSuite) and web tools (such as CoSpaces Edu, MetaVerse, Panoform, ThingLink, Story Spheres).

To prepare the final project successfully – classical (Open-Ended Projects) or “by inspiration” (Passion Projects) – students were involved in realization of technologies:

- art design coaching;
- functional excursion (work based learning (WBL)) (Nie, Armellini, Witthaus, & Barklamb, 2011);
- team teaching the problem (using video, audio; listening to podcasts, reading the blog).

Due to the limited ability to remotely convey the full range of emotions of each student and the emotional background of the group, which is so important for effective and full learning, we have used Training management system (TMS), where you can track the student's enthusiasm for learning.

Programs such as Kahoot!, Google Forms, ClassKick, Socrative and EdPuzzle have been used to formatively evaluate the results of bite-
size learning. Moreover, anonymous mutual evaluation of yearlings has been a particularly effective type of interaction.

**General Information**

To predict the influence of BSL on the disclosure of the mental experience (ME) of the student, we carried out a comparative analysis of the results of modular tasks – separately by students studying e-Learning technology and separately by students working in BSL format. Criteria variables were expert data and self-assessments of identified competencies:

- learning as creativity;
- constructing an individual learning trajectory based on personal experience;
- valuable-semantic transformation.

**Sample**

The sample consisted of 198 future psychologists: 103 students of joint e-Learning (hereinafter – control group, CG) and 95 students who studied by distance BSL (experimental group, EG). The experimental study was conducted on the basis of Ternopil Volodymyr Hnatiuk National Pedagogical University (n¹ = 95 people) and Khmeñytsky National University (n² = 103 people). The formative experiment lasted during 2019-2021 (3 training cycles).

**Research Tools**

To diagnose the student's mental experience, we used such methods as: “Self-actualization test” (SAT) (Aleshina et al., 2011), Multi-scale survey method “Behavioral self-regulation style” (BSS) (Morosanova, 2004), test-questionnaire of the level of subjective control (LSC) (Bazhin, 1993), D. McLean's questionnaire (Osin, 2010); 7-factor test "Self-regulation of mental experience in educational activities" (Kholodnaya, 2018); questionnaire "Relief of mental state" O. Prokhorov (Prohorov et al., 2020).

**Procedure of Experimental Study**

1. The effectiveness of the implementation of students’ mental experience in the context of interactive digital education (CG), on the one hand, and the introduction of the BSL (EG) format, on the other hand, was evaluated according to the quality indicators:
   - self-actualization,
   - subjective control and self-realization,
• motivation to succeed in learning.

The content of each module of the course included four blocks of tasks designed for 4 levels of difficulty:
• the first level was characterized by cognitive simplicity (minimum of differentiation and integration);
• the second level was characterized by increasing differentiation and lack of integration of content, instability of judgments and uncertainty;
• the third level was characterized by moderate differentiation and integration of content, openness to new experiences, reflective self-esteem;
• the fourth level was characterized by a high level of differentiation and integration of content, which required flexibility and causality of thinking.

Based on the results of the completed tasks, we determined the levels of development of students’ formalization, constructive and executive abilities:

2. Visualization of indicators of the studied characteristics of mental experience of students of joint e-Learning and BSL by means of the Graphviz program.

3. Cluster analysis and the selection of 3 clusters of students according to the level of the impact of different learning formats on realization of their mental experience.

**Statistical analysis**

Ideographic methods were used to study the products of epistemological creativity of an individual as a defining characteristic of his mental experience. Testing of the diagnostic complex was carried out using the computer program “INT”. Methods of correlation analysis, cluster analysis (Average Linkage) and factor analysis (Analysis of principal components) were applied for the computational analysis of the results.
Research Outcomes

Table 2. Comparison of indices of self-actualization level of students of joint e-Learning (control group) and BSL (experimental group), defined by SAT test:

<table>
<thead>
<tr>
<th>№ of scale</th>
<th>Name of scales</th>
<th>Maximum score</th>
<th>CG</th>
<th>Points</th>
<th>%</th>
<th>EG</th>
<th>Points</th>
<th>%</th>
<th>Significance of differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Values</td>
<td>18</td>
<td>9,73</td>
<td>51,27</td>
<td>11,04</td>
<td>60,0</td>
<td>U =3186***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Chronemics</td>
<td>21</td>
<td>11,66</td>
<td>55,5</td>
<td>15,59</td>
<td>74,23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Adaptive agility</td>
<td>25</td>
<td>11,82</td>
<td>47,3</td>
<td>16,28</td>
<td>65,1</td>
<td>U=3534***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Sensitivity</td>
<td>14</td>
<td>7,81</td>
<td>55,71</td>
<td>10,68</td>
<td>76,3</td>
<td>U =4031,6*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Immediacy</td>
<td>15</td>
<td>8,88</td>
<td>59,2</td>
<td>8,02</td>
<td>53,4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Self-worth</td>
<td>22</td>
<td>10,77</td>
<td>49,0</td>
<td>14,31</td>
<td>65,0</td>
<td>U =3718**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Promoting “self-correction”</td>
<td>8</td>
<td>4,14</td>
<td>51,7</td>
<td>5,05</td>
<td>63,1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Person’s worldview</td>
<td>17</td>
<td>8,75</td>
<td>51,5</td>
<td>10,17</td>
<td>59,8</td>
<td>U =3941,8*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>The urge to be creative</td>
<td>21</td>
<td>10,22</td>
<td>48,7</td>
<td>14,48</td>
<td>68,9</td>
<td>U =4038,2*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Need for cognition</td>
<td>12</td>
<td>6,75</td>
<td>56,2</td>
<td>8,21</td>
<td>68,4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 3. Comparison of indices of subjective control level of students of joint e-Learning (control group) and BSL (experimental group), defined by LSC test:

<table>
<thead>
<tr>
<th>№ of scale</th>
<th>Name of scales</th>
<th>Maximum score</th>
<th>CG</th>
<th>EG</th>
<th>Significance of differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Points %</td>
<td>Points %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Internality in the field of achievement</td>
<td>44</td>
<td>28,04</td>
<td>60,7</td>
<td>29,64</td>
</tr>
<tr>
<td>2</td>
<td>Frustration tolerance</td>
<td>12</td>
<td>8,52</td>
<td>71</td>
<td>8,67</td>
</tr>
<tr>
<td>3</td>
<td>Sense of hierarchy</td>
<td>12</td>
<td>7,85</td>
<td>65,4</td>
<td>8,08</td>
</tr>
<tr>
<td>4</td>
<td>Internality in the field of learning as creativity</td>
<td>10</td>
<td>5,96</td>
<td>59,6</td>
<td>6,49</td>
</tr>
</tbody>
</table>

Table 4. Indicators of self-regulation of students of joint e-Learning (control group) and BSL (experimental group), defined by BSS test:

<table>
<thead>
<tr>
<th>№ of scale</th>
<th>Name of scales</th>
<th>Maximum score</th>
<th>CG</th>
<th>EG</th>
<th>Significance of differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Points %</td>
<td>Points %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Programming</td>
<td>10</td>
<td>4,74</td>
<td>47,4</td>
<td>5,89</td>
</tr>
<tr>
<td>2</td>
<td>Modelling</td>
<td>10</td>
<td>5,44</td>
<td>54,4</td>
<td>8,53</td>
</tr>
<tr>
<td>3</td>
<td>Self-assessment</td>
<td>10</td>
<td>5,55</td>
<td>64,6</td>
<td>6,24</td>
</tr>
<tr>
<td>4</td>
<td>Self-sufficiency</td>
<td>10</td>
<td>5,68</td>
<td>56,8</td>
<td>7,95</td>
</tr>
</tbody>
</table>
Table 5. Comparison of indices of the level of academic motivation and need for success achievement of students of joint e-Learning (control group) and BSL (experimental group), defined by 7-factor test “Self-regulation of mental experience in educational activities”:

<table>
<thead>
<tr>
<th>№ of motives</th>
<th>Types of motives</th>
<th>CG</th>
<th></th>
<th>EG</th>
<th></th>
<th>Significance of differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Points</td>
<td>%</td>
<td>Points</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Motivation for achievement</td>
<td>3,19</td>
<td>63,8</td>
<td>3,23</td>
<td>64,6</td>
<td>&quot;</td>
</tr>
<tr>
<td>2</td>
<td>Motives for avoiding failure</td>
<td>1,95</td>
<td>39</td>
<td>1,98</td>
<td>39</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>Perfectionism</td>
<td>3,40</td>
<td>51,12</td>
<td>3,26</td>
<td>48,37</td>
<td>3,40</td>
</tr>
<tr>
<td>4</td>
<td>Intrinsic of professionalism</td>
<td>4,14</td>
<td>74,65</td>
<td>4,53</td>
<td>80,24</td>
<td>4,14</td>
</tr>
<tr>
<td>5</td>
<td>Motivation for creative performance</td>
<td>2,68</td>
<td>72</td>
<td>3,54</td>
<td>78,1</td>
<td>U = 9,136*</td>
</tr>
<tr>
<td>6</td>
<td>Learning and cognitive motives</td>
<td>2,60</td>
<td>63,6</td>
<td>3,87</td>
<td>71,1</td>
<td>U = 9,641*</td>
</tr>
<tr>
<td>7</td>
<td>Communicative motives</td>
<td>3,22</td>
<td>64,4</td>
<td>3,32</td>
<td>67,1</td>
<td></td>
</tr>
</tbody>
</table>

Correlation analysis of 20 defining indicators of the characteristics of mental experience in the studied learning formats revealed almost the same level of correlation in the scales “Self-sufficiency”: $r = 0.357$; $p = 0.001$ and $r = 0.340$; $p = 0.001$, “Values”: $r = 0.314$; $p = 0.001$ and $r = 0.318$; $p = 0.001$, “Self-worth”: $r = 0.355$; $p = 0.001$ and $r = 0.318$; $p = 0.001$, “The urge to be creative”: $r = 0.203$; $p = 0.05$ and $r = 0.226$; $p = 0.05$. Significant correlations have been established between the Adaptive Agility scale and the scales on which EG and CG students differ: “Immediacy”: $r = 0.285$; $p = 0.001$ and $r = 0.422$; $p = 0.001$, “Internality in the field of learning as creativity”: $r = 0.301$; $p = 0.05$ and $r = 0.209$, $p = 0.05$, “Self-worth”: $r = 0.355$; $p = 0.01$ and $r = 0.244$; $p = 0.05$. There are 5 significant correlations between the indicators of the scale “Self-worth” and the scales: “Adaptive agility”: $r = 0.355$; $p = 0.001$ and $r = 0.318$; $p = 0.001$, “Self-sufficiency”: $r = 0.308$; $p = 0.001$ and $r = 0.267$; $p = 0.001$, “Internality in the field of learning as creativity”: $r = 0.292$; $p = 0.001$ and $r =
0.259; p 0.05, “Internality in the field of achievement”: r = 0.27; p 0.01 and r = 0.25; p 0.01, “Modeling”: r = 0.268; p 0.001 and r = 0.274; p 0.001. The results of the correlation show that students of the microlearning format have a higher level of individual disclosure of mental resources. This allows them to correctly specify the learning objective in accord with the current significant learning conditions, quickly understand the changing situation, and, according to the conditions, choose the program of executive learning activities or tactics of behavior with the teacher.

The calculation of the reliability characteristics of the evaluation of mental experience indicators based on the results of correlation analysis was performed using the Excel package (SPSS and R packages were used once to assess the magnitude of the design effect).

Below there is a visualization of the implementation levels of mental experience indicators in terms of CG (Fig. 4) and EG clusters (Fig. 5):

![Graph](image-url)

**Fig. 4.** The level of implementation of indicators of mental experience of CG students (according to the results of cluster analysis)


Fig. 5. The level of implementation of indicators of mental experience of EG students (according to the results of cluster analysis)


Discussion

The study has confirmed the opinion of paleo-neurologists that "the result of a long historical period of total conformism and social adaptation of man has been the process of his cerebral specialization, i.e. the displacement of creative and self-thinking individuals" (Savel'ev, 2014). The results of creative projects performed by CG students have shown that the consequence of the "terror of communication" is the motivation of a person
to gradually reorient to the inductive and collective nature of design thinking and displacing the student's research competence by collaborative iteration. The reason for this is the constant stay of the modern student in the hyper-information environment, and the constant use of audio-video content forces the central executive network of his brain to be in a state of excessive systematic activity. Therefore, energy does not enter the areas of the brain that are responsible for thinking. This conclusion has been reached by Marcus Raichle (2015), a neurologist at the University of Washington, and Ashley Chen (2013), a psychologist at Stanford University. Referring to their research, a famous Russian psychotherapist, Andrei Kurpatov (2021) concludes that the consequence of insufficient activation of modern students’ mental apparatus is a problem with distal vision, i.e. the ability to begin designing concepts and ways of their implementation from the original purpose. That is why the typical strategy of creating a design project is now implemented by an algorithm: \textit{idea} → \textit{hypothesis} → \textit{prototype} → \textit{experiment} → \textit{iteration}.

In an effort to correct this situation, we have tried to implement the author's model of self-learning as creativity in the BSL format. According to the results of EG respondents, it has proved to be effective in providing pedagogical conditions for the environmentally appropriate development of the student through learning in his own optimal mode of achieving success.

The chronological metro-rhythm of the thinking process, proposed by Gloria Mark, a professor of computer science at the University of California, has helped each student realize the genetic opportunity for arbitrary transitions from the observer to the thinker, as well as the ability to be permanently in the medial state between freedom of experience and its understanding. In addition, the introduction of the principles of didactics of performative action in a situation of reasonable limitation of digital tools has prompted the student to activate not only RAM (Dijksterhuis et al., 2006; Vegner & Uord, 2014), but also the euphoria of engrams. Peculiarities of students' behavior in BSL conditions, as well as the specifics of this learning format reflect the results of cluster analysis. Thus, the implementation of BSL, on one hand, provides a high level of independence, responsibility, self-control, and on the other hand, contributes to the realization of these qualities as characteristics of personalized mental experience. That is why EG students have higher indicators of self-actualization on 14 scales than CG students. And the significance of the difference $U = 4035.5^*$ (at $p <0.05$ according to the U-Mann-Whitney test) in favor of the EG respondents on the scale "Perceptions of human nature" successfully correlates with the indicator "Learning and cognitive motives". However, the
last place of the indicator on the scale "Time orientation" among the data of CG respondents on 12 scales and the increase in the number of deviations from 6540.53 to 7612.93 indicate that students are more focused on the immediate success than on their future.

**Conclusions**

The developed course design of the BSL format, as the research has shown, has provoked a sufficient flow of events, acts of successful experience of future teachers in self-disclosure of the mental experience of the person. To help future students build their own trajectories of development, they have learned to identify and reflect in the data all the significant elements of these trajectories, to capture the digital footprint of human development. All this confirms the leading idea of our study: the disclosure of the resources inherent in human nature in the process of learning is the way for the relentless cognition of the sense of placement with a view to achieving dignity and making free choices in life.

The key to the introduction of author’s technology BSL, as research has shown, is determined by the relationship "student – teacher" (as "traveler" – "companion"), because that is where education takes place as a spiritual transformation.

**Implications, limitations and future directions**

The emergence of BSL in professional training does not provide enough a psychologically, physiologically, pedagogically and methodologically sound balance between the realization of computer capabilities and live dialogic communication of the student as a developing person. This study is one of those that reveals the problem of contradictions in the technology as a powerful tool for professional growth and as an equally powerful obstacle in its path, which inevitably captures the finished scenario of achieving success. A promising continuation of the study is the creation of psychological and pedagogical theory of BSL, which can justify the implementation of processes (biological and social, conscious and unconscious, affect and intellect, rational and irrational) in human nature and allow future professionals to make free choices on the path to disclosure as a personality.
Acknowledgement

The authors’ contribution to the paper was as follows: documentation: Ludmila Kondratska, Liudmila Romanovska, Tetiana Kravchyna, Nataliia Korolova, Tatiana Gudz; data collection: Ludmila Kondratska, Liudmila Romanovska; data processing: Tetiana Kravchyna, Nataliia Korolova, Tatiana Gudz; writing: Ludmila Kondratska, Liudmila Romanovska, Tetiana Kravchyna, Nataliia Korolova, Tatiana Gudz.

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