Student’s Creative Stages and Their Media Products through Project-Based Learning (PjBL)

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Abstract. This research aims at: 1) describing student’s creativity in creating instructional media through Project-Based Learning; 2) describing the creativity of media products created by the students through Project-Based Learning. Descriptive research design by means of qualitative descriptive approach was applied. Interview and open-ended questionnaire were set to measure the student’s creativity stages. Further, the product creativity was measured by means of a rubric developed by product creativity indicator. The validation test was targeted to cover some aspects, to name Credibility, Transferability, Dependability, and Counterpart. For data analysis, Interpretative Phenomenological Analysis (IPA) was occupied. The result had indicated that creativity stages comprised preparation, incubation, illumination, and sustainable verification. In addition, product creativity met the state of ‘surprise, originality, beauty, and utility’ with diverse creativity.

Keywords: PjBL, creativity stages, product creativity, media

INTRODUCTION

Learning Source and Teaching Media’ course of study is intended to provide students with the ability to design, develop, and utilize instructional media in the classroom. During the instruction, students are supposed to be able to integrate and make use of ICT (such as a computer, internet, application programs, and so forth) as instructional media. ICT materials highlight computer-assisted and internet-assisted instructional activities.

Further, students are assigned to create IT-based and non-IT-based instructional media and work on other assignments in groups. In the project of media creation, they are demanded to produce effective instructional media; thus, creativity constitutes an essential factor which students need to demonstrate during the media creation, starting from designing to assessing the created media. To actualize the creativity, a proper instructional method and strategy is needed. Project-Based Learning (PjBL) is one of the instructional models to give a chance to teachers to manage classroom activities through projects by which students’ creativity and motivation are supposed to get improved [1], [2]. A research brought out by [3] had indicated that: (1) cooperative STAD-PjBL improved students’ motivation. Besides, all components of motivation were interconnected, influencing one another, and unified. The four components contributed equally to motivation; and (2) cooperative STAD-PjBL enhanced the thinking skill.

Moreover, creativity is defined as a process or ability that indicates fluency, flexibility, and originality of thinking process. Also, it illustrates an ability to elaborate (to develop, enrich, specify) specific idea. As a consequence, students are strongly demanded to ‘think out of the box’ and be creative in finding out new and innovative ways of producing new instructional media products. For that reason, how students’ creativity stages are and how product creativity of the created media is are in need of investigation.

In accordance with the overview as mentioned earlier, these are the research problems formulated in this current research: 1) How are the students’ creativity stages in instructional media production through PjBL? and 2) How is the product creativity of the media produced by students through PjBL?

Meanwhile, the aims of the research are to: 1) describe the students’ creativity stage in producing media through PjBL, and 2) describe the product creativity of the media produced by students through PjBL.

Literature Review

Project-Based Learning (PjBL) and Working Motivation

In general, Project-Based Learning is a refinement of Problem-Based Learning. Additionally, PjBL is defined as one of CTL-oriented (contextual teaching and learning) training strategy. PjBL is concerned more on authentic problem-solving strategy upon daily experiences through direct practice among society. Project Based Learning is also referred to by other names, such as project-based teaching, experience-based education, authentic learning or anchored instruction [4]. [5] proclaimed that PjBL is used to refer to many contextualized approaches to instruction that lies much on concrete learning and teaching. Focusing on concrete problems that drive to the learning process becomes the essence inmost definition of PjBL. Therefore, PjBL can be applied to accommodate instructional activities that focus on developing products through project works. In other words, a project is categorized as an authentic work or assignment that can be assessed based on its final result. PjBL model was effective to positively influence students’ creativity and learning outcomes.

Media Development and Product Creativity

Instructional media referred to anything that could assist instructional activities and was functioned to
perceive the hidden meaning so as to meet the essential
goal of instructional activities, perfectly and properly.
Instructional media referred to the physical means of
carrying instructional content, book, films, videotapes,
and so forth. Thus, instructional media constitutes any
tools that can stimulate students to get into instructional
activities. By then, instructional media is in need of
development in order to meet the essence of
meaningfulness, which is able to help and stimulate
students to learn for better learning outcome and
instructional process. In instructional media
development, the state of innovation and creativity is of
the essence to make the media effective to help students
develop thinking and product creativities.
Creativity could be defined as such number of terms
as person, process, and product; which evolved as ‘Four
P’s of Creativity’ comprising person, process, press,
product. During the process of creativity, [6] described
the creativity stages by order, which were: preparation,
incubation, illumination, and verification. The dimension
of creative work actualization from this process refers to
the development of the creative work into the
instructional activities and educational foci in general.
Thus, to reiterate, product creativity is considered
ideal only if it meets the criteria of surprise, originality,
utility and beauty. Further, the use of media will also
promote trainee teachers’ efficiency in instructional
media designing, production, and management.
In addition, the experience can be transferred to their
post-training assignment as teachers for better perfection in
later years as serving teachers [7].

METHOD

Research Design and Approach

This research occupied qualitative research design by
means of a descriptive approach. It was due to the fact
that this current research illustrated creativity stages and
product creativity of instructional media.

Location and Data Source of the Research

The research was conducted on Faculty of Teacher
Training and Education of University of Muhammadiyah
Malang at ‘Learning Source and Teaching Media’ course
of study. The main data source was taken from the words
or statements uttered by respondents, the students. At
last, the data about product creativity was based on the
observational result on the media produced by the
students.

Data Collection Technique and Research Instrument

The data of creativity stages were collected by means of
interview and open-ended questionnaire. Further, the
product creativity was measured by means of a rubric
developed from indicators of creativity that consisted of
some criteria, which were surprise, originality, beauty,
utility, and beauty and utility. Meanwhile, the open-
ended questionnaire was used to measure preparation,
incubation, illumination, and verification stages.

Validity Test and Data Analysis

Data validity test was performed by validating all the
findings that covered credibility, transferability, and
dependability. Qualitative data analysis was begun by
analyzing the result of structured interview through
Interpretative Phenomenological Analysis (IPA). Next,
while the data of observation were described, the
documents were sorted based on the set category and
inductively and descriptively analyzed. Moreover, the
data were explored by developing the existing patterns to
result in formulated findings [8]. Specifically, data
analysis was meant to answer the research problems: 1)
how are the students’ creativity stages in instructional
media production through PjBL? and 2) how is the
product creativity of the media produced by students
through PjBL?

RESULT

Result of Creativity Stages

Respondent’s creativity stages in instructional media
development consisted of four stages, namely
preparation, incubation, illumination, and verification.
The data of the four were presented and specified in
Table 1.

<table>
<thead>
<tr>
<th>Table 1. Result of Creativity Stages</th>
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<tbody>
<tr>
<td>Stages</td>
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<tr>
<td>---------------------------------</td>
</tr>
<tr>
<td>Preparation</td>
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<tr>
<td>Incubation</td>
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<tr>
<td>Illumination</td>
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<td>Verification</td>
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</table>

The result of the research had indicated that PjBL
instruction was allowed to direct students to think
creatively through the four stages. In addition, [9] in his
research supported that student creative thinking skill in
PjBL instruction was more significant than that of in
cooperative learning model. In other words, it could
mean that PjBL instruction was effective to advance
students’ creative thinking process. Meanwhile, based on
the observation, student’s activities during the instruction
also increased positively. This finding is in line with the
one brought out by [10] of which result also indicated
that cooperative problem-based learning could
significantly improve student’s learning outcomes in
chemistry course of study (with 0.000 of significance).
In addition, this sort of learning model could improve
students’ creativity and democracy to 84.1 % and 86.4 % of effectiveness.

The creative thinking process is said as the starting point to begin and produce innovation of work. Innovation constituted a practical implementation of creative ideas. Innovation will exist along with high creativity in which creativity alone is an ability to bring something new to real life.

Result of Product Creativity

The result of analysis on the products made by students covered some aspects, such as surprise, originality, beauty, utility and beauty and utility. It was presented in Table 2.

<table>
<thead>
<tr>
<th>Table 2: Result of Product Creativity</th>
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<tbody>
<tr>
<td><strong>Indicators</strong></td>
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<tr>
<td>Surprise</td>
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<td>2. Media were attractive.</td>
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<td>3. Media were the results of associating ideas.</td>
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<td>4. Media were created in unexpected ways.</td>
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<tr>
<td>Originality</td>
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<tr>
<td>2. Media were completely new and never existed before.</td>
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<tr>
<td>3. Media were not only about the combination, but also transformation and transcendence.</td>
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<tr>
<td>4. So-called ‘new’ media were the bases of rearrangement on the existing ideas.</td>
</tr>
<tr>
<td>Beauty</td>
</tr>
<tr>
<td>2. Media showed something beautiful.</td>
</tr>
<tr>
<td>3. Media were imaginative.</td>
</tr>
<tr>
<td>4. Media were easy to convey meanings.</td>
</tr>
<tr>
<td>Utility</td>
</tr>
<tr>
<td>2. Media were unambiguous and independent on contexts.</td>
</tr>
<tr>
<td>3. Media raised comfort.</td>
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<tr>
<td>5. Media were able to specify ideas and details.</td>
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<tr>
<td>6. Media made ones focus on the idea and send them to a logical conclusion.</td>
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<tr>
<td>7. Media gave detailed information and complexify it.</td>
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</tbody>
</table>

The media produced by students were considered as creative products that were equipped with diverse characteristics, but the principles met the characteristics of creative products themselves. PjBL instruction had directed students to work systematically, innovatively, and creatively. Thus, this research indicated that, in order to enhance student’s creativity, teachers should be fully aware of creativity, be teaching for creativity, be required to develop and assess student’s creativity, and be trained to make use of creative equipment. Keywords C [9] argued that the components of PjBL instruction consisted of teachers and students who were supposed to support one another, by giving systematical support for critical thinking actualization that would generate product creativity in a form of instructional media. Further, PjBL creates a learning environment that fosters creativity and teamwork, which teaches children to use the tools at their completion to find out the most innovative solutions to the problems that are always emerging.

However, it is also acceptable in PBL to create an opportunity for students to choose the way how they would like to demonstrate their own learning. For example, in addition to a group or team presentation, learners are likely allowed to produce an individual product that might take on a number of forms, such as video (or film), written product, podcast, photo essay, website or any number of other products.

CONCLUSION

In regards to the result of data analysis and discussion, the research concluded that PjBL instruction is effective to make students creative in instructional media creation. Moreover, product creativity highlights various creativity characteristics in each individual product.

REFERENCES