Project Based Learning: Effect on Student Interest, Challenge-Seeking, Choice, Enjoyment and Content Knowledge

A brief introduction

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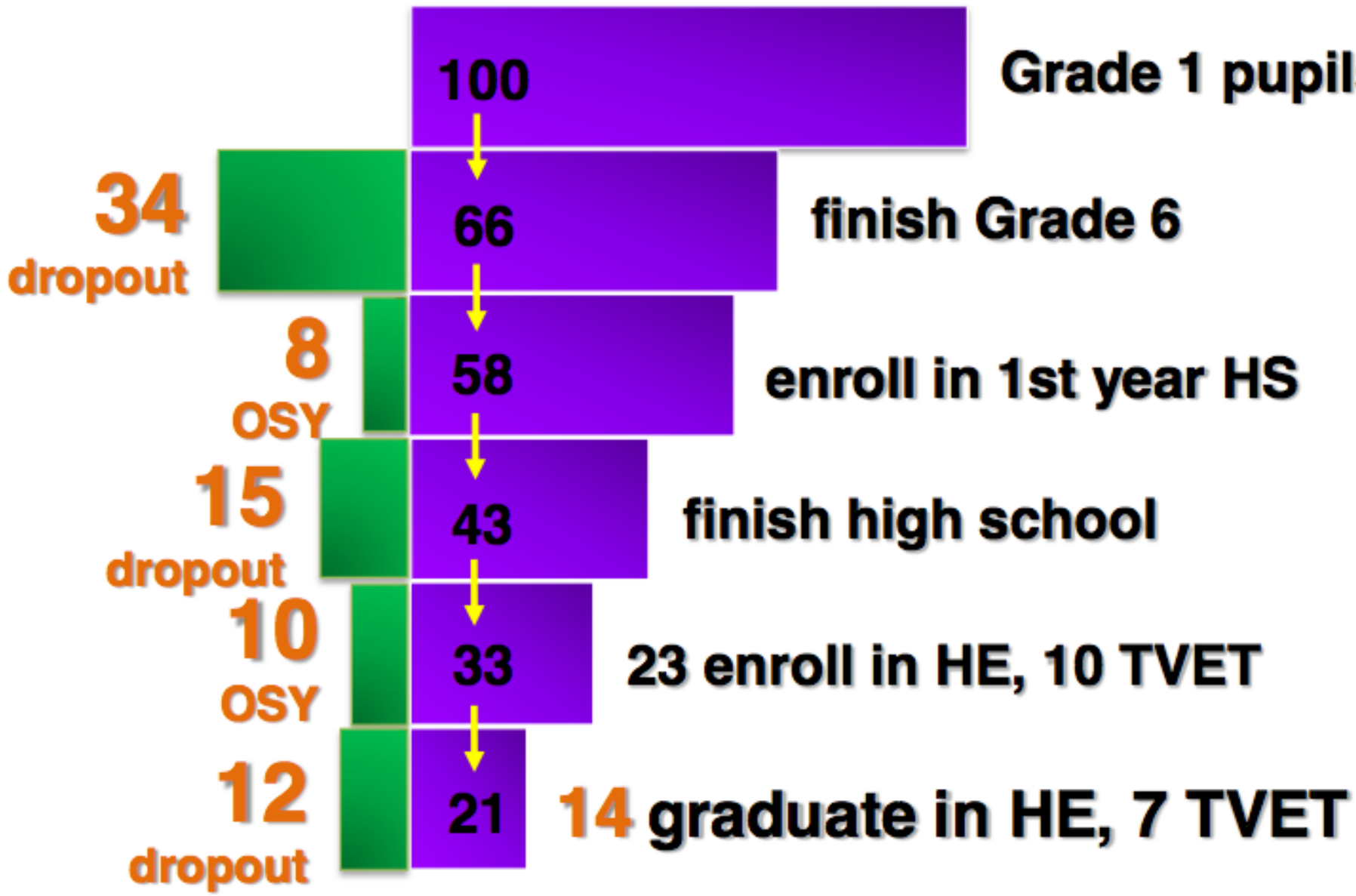
The Philippines

Low Completion Rate



Legend: HE= higher education
TVET= technical vocational education training

Source: http://www.deped.gov.ph

Low Student Achievement

National Achievement Test

	2007-08	2008-09	2009-10
Grade School	64.81%	66.33%	69.21%
High School	46.84%	47.40%	40.38%

Source: Department of Education

International Assessment

TIMSS (Trends in International Math and Science Survey)

The only international comparative survey test the Philippines participated in.

Students performed poorly in the 1998 and 2003 tests.

1998 – the Philippines ranked 36th out of 39 countries

2003 – 41st out of 45 participating nations

Source: Luz, J.M. (2011) Brigada Eskwela

The Philippines must catch up with the rest of the world.

Country and Overall Rank	2008	2009	2010	2011
Singapore	5	3	3	2
Malaysia	21	24	26	21
Brunei Darussalam	39	32	28	28
Thailand	34	36	38	39
Indonesia	55	54	44	46
Vietnam	70	75	59	65
Philippines	**71**	**87**	**85**	**75**
Cambodia	109	110	109	97

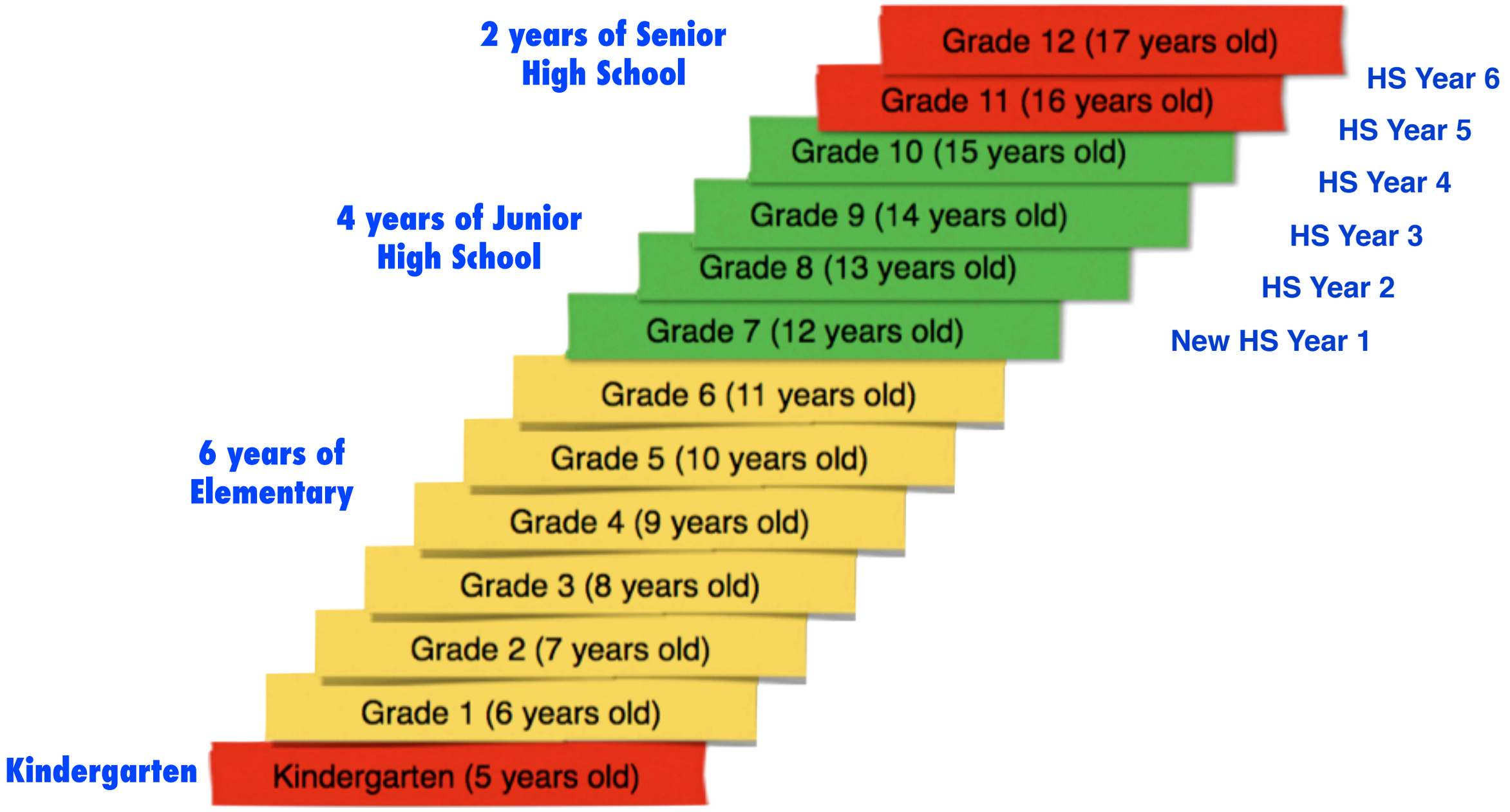
Data from the: ***World Economic Forum Global Competitiveness Report***

Primary Aim of Basic Education

- ***"To produce holistically developed learners who have 21st century skills and are prepared for higher education, middle- level skills development, employment, and entrepreneurship"***

- Bro. Armin Luistro, DepEd Sec.

K + 12 Implementation in 2012



Source: Department of Education

K + 12 Framework

Integrative, Inquiry-based, Constructivist

Focus on the optimum development of the Filipino

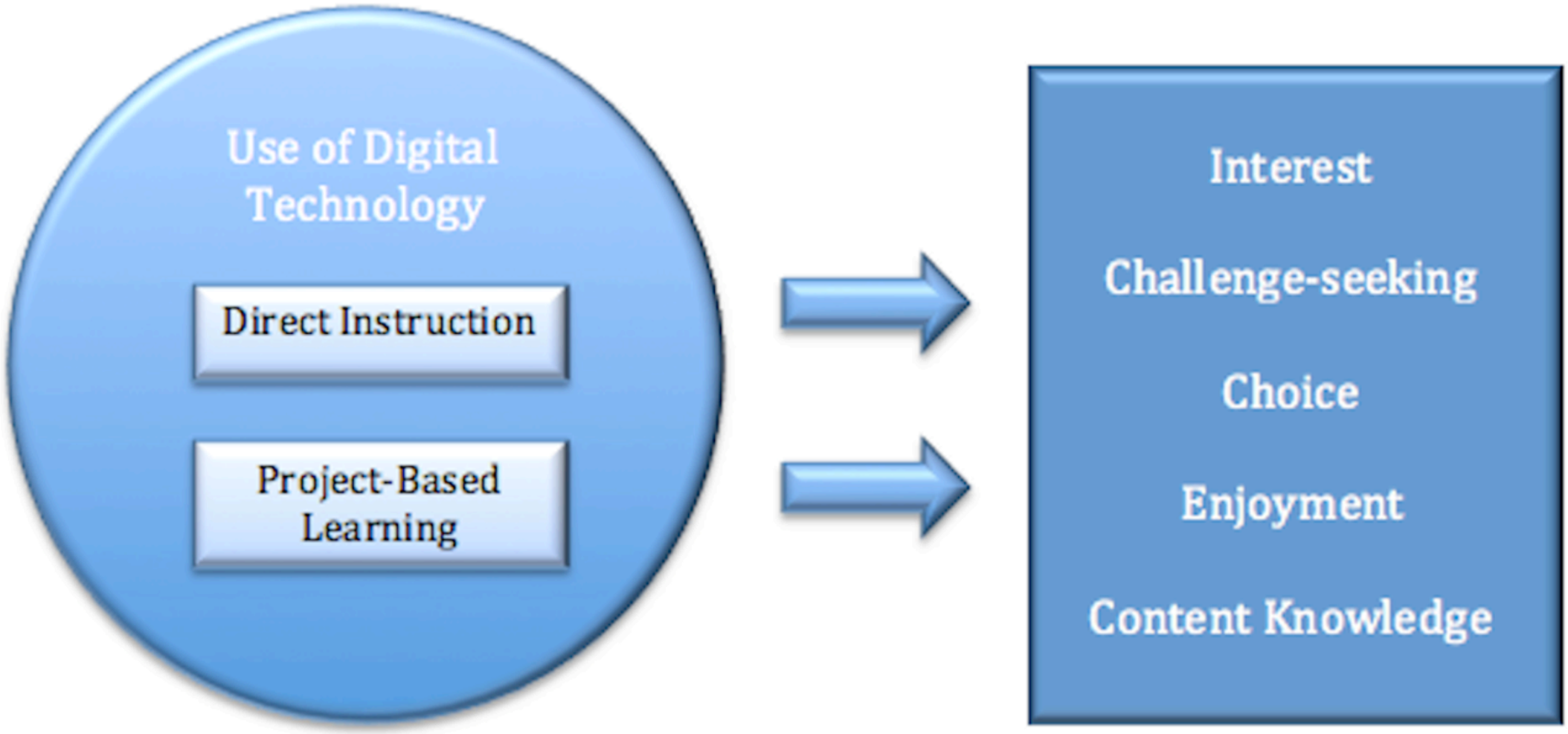
Flexible to local needs

Allows for mastery of the competencies

Continuum following an expanding spiral progression model

Source: Department of Education

Conceptual Framework



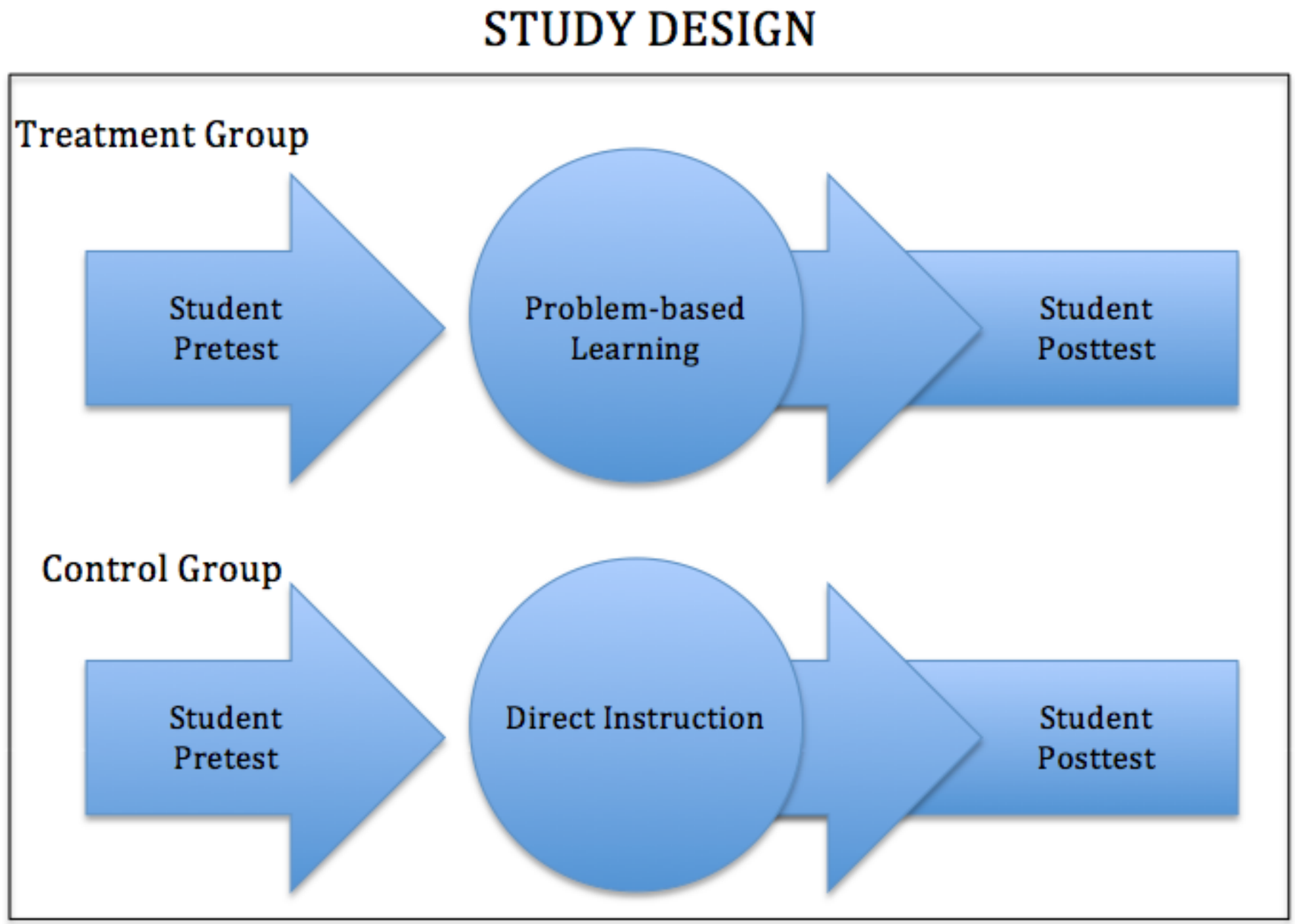
Research Design

Participants were provided instruction in their familiar classroom while controlling for external validity such as the teacher, curriculum objectives, and content.

Both PBL and DI used digital technology but PBL is student-centered (collaborative work) while DI is teacher-directed (lecture type).

Research Design

Quasi-experimental Between Subjects Design



Participants

- 48 Grade 6 students from public and private schools in an urban area
- Low to middle socio-economic class
- 22 males and 26 females

Instrumentation

(1) My Class Activities Instrument developed by Gentry and Gable to measure student interest, challenge-seeking, choice and enjoyment

(2) Teacher-Made Content Knowledge Test to measure student content knowledge on the topic of study

Quantitative Method

Descriptive Statistics

Significance Test:
t test

Qualitative Data

To support the quantitative analysis, qualitative data

were gathered and analyzed:

Students' Journal Entries

Teacher's Observation Log

Instruction

- Three (3) instruction days with each class session lasting two hours
- Included time for students to reflect on their lessons, activities and performance each meeting.

Discussion of Data Results

Interest

- Mean scores INCREASED from pretest to posttest in BOTH groups
- No significant difference between PBL and DI participants

Challenge-Seeking

- Mean scores INCREASED from pretest to posttest in BOTH groups
- Statistically significant difference in **PBL** pretest and posttest scores

Choice

- Mean scores INCREASED in PBL group
- Mean scores DECREASED in DI group
- NO statistical significance in the difference of pretest and posttest scores in both groups

Enjoyment

- Mean scores INCREASED in PBL group
- Mean scores DECREASED in DI group
- NO statistical significance in the difference of pretest and posttest scores in both groups

- Based on analyses and interpretation of the qualitative data presented, participants in the PBL group exhibited higher level of student interest, challenge-seeking, choice and enjoyment compared to the DI group.

Content Knowledge

- Both DI and PBL groups INCREASED their scores in the posttest of the content knowledge test.
- But based on the t test, the DI group performed generally better in the test than the PBL group.

Implications to Teaching

- Integrating technology and project-based learning in teaching can result to increased student interest, choice, challenge-seeking and enjoyment.

- Emphasized the benefits of student-centered hands-on learning with digital tools as compared to teacher-led lecture class using technology

- The novelty of the digital tools caught the attention and interest of the participants of both study groups but student interest may only be sustained if the teacher provides a variety of engaging activities for the students.

- Because of the strong evidence supporting project-based learning in the classroom, students should be encouraged to engage in projects that are interesting, relevant and meaningful to them.

Teachers to understand negative academic emotions such as boredom and anxiety as they decrease academic motivation and learning.

- The need to provide multiple opportunities for students to feel successful in class

Implications to Research

- Supporting QUANTITATIVE data with QUALITATIVE data could yield more enriching research findings revealing the intricacies and complex processes that so often characterize learning and teaching.

- Need for more rigorous investigation of the effectivity of instructional methods in terms of its impact on student motivation and learning

Implications to our Work as School Leaders

- Training teachers as coaches and facilitators for collaborative learning is imperative.

Implications to our Work as School Leaders

- Because project-making can take considerable resources which include materials, equipment, human resources and time, having a strong school support can make a difference.

"The trouble with our times is that the future is NOT what it used to be."

- Paul Valery

If we teach today's students
as we taught yesterday's,
we rob them of tomorrow.

- John Dewey

Thanks for listening!