Investigating Students’ Engagement in Process Writing: A mixed method approach

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Investigating Students’ Engagement in Process Writing: A mixed-methods approach

Dr. Xiaomei Song & Dr. Chen Chen
a) At the completion of the Writing-Enriched course(s), a greater percentage of students will voluntarily engage in the processes of writing through the use of
   – Researching
   – Drafting
   – Reflecting
   – Collaborating
   – Revising
   – Editing

b) At the completion of the Writing-Enriched course(s), a greater percentage of students will articulate the specific impacts or effects of engaging in the process of writing.
“Literate actions emerge out of a constructive cognitive process that transforms knowledge in purposeful ways...this constructive literate act may also become a process of negotiation in which individual readers and writers must juggle conflicting demands...  

Social Cognitive Theory (Flower, 1990;1994)
Method

Concurrent mixed-methods design

- QUAN instrument
- QUAL instrument
- Analysis & results
- Compare & contrast
- Interpretation
- Merging in the discussion
**Participants**

- Survey

**Part 1: background information**

**Part 2: six 6-point Likert-scale**

**Part 3: impact of writing processes**

**Data collection and analysis**

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**QEP Process Writing Survey**

### Part 1: Background information

<table>
<thead>
<tr>
<th>Your college:</th>
<th>CEIT (Engineering &amp; Information Technology)</th>
<th>COE (Education)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CHHS (Health &amp; Human Sciences)</td>
<td>JPHCOPH (Public Health)</td>
</tr>
<tr>
<td></td>
<td>CLASS (Liberal Arts &amp; Social Sciences)</td>
<td>COSM (Science &amp; Mathematics)</td>
</tr>
<tr>
<td></td>
<td>COBA (Business Administration)</td>
<td>Other. Please specify ________________</td>
</tr>
</tbody>
</table>

**Your major/program: ________________________________**

### Part 2: Think about the processes you used to complete your graded writing assignments during the previous academic term. For those assignments, how frequently did you engage in the following activities voluntarily, without explicit instruction?

<table>
<thead>
<tr>
<th>Process</th>
<th>Never</th>
<th>Very rarely</th>
<th>Rarely</th>
<th>Occasionally</th>
<th>Usually</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Researching (gathering and evaluating relevant information)</td>
<td></td>
<td></td>
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<tr>
<td>Drafting (creation of the early or preliminary first draft)</td>
<td></td>
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<tr>
<td>Reflecting (rereading drafts/comments and planning potential changes)</td>
<td></td>
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<tr>
<td>Collaborating (conferencing with others such as friends and teachers to elicit their feedback)</td>
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<tr>
<td>Revising (creating multiple versions to address reasoning, logic, audience, and flow of ideas)</td>
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<td></td>
</tr>
<tr>
<td>Editing (correcting grammar and mechanical errors)</td>
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</tr>
</tbody>
</table>

### Part 3: Please respond to the following items pertaining specifically to your writing strategies.

1. Think about the time that you completed a major writing assignment. Did you submit your first draft as your final? If you made revisions, could you describe your thought process that guided any changes you made?

2. How do you feel your writing benefited from the processes you described above?

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Georgia’s large-scale, small-feel research university
• Participants
  - 5: CEIT - Mechanical Engineering & Civil Engineering
  - 2: CHHS - Nursing & Exercise Science
  - 2: COPH - Health and Promotion
  - 3: COE - Early Childhood Education
  - 1: COSM - Mathematics
  - 2: CLASS - Psychology & Music

• One-on-one interview
  - Semi-structured interview protocol

• Data collection and analysis
Results

• Sufficient reliability evidence ($\alpha = .80 \& .88$)
• WAC assignments (QUAL)
  ➢ Research paper/teaching plan

“I chose the topic management versus leadership. So I took three articles and synthesized them to, like, prove my point which was that leaders and managers are both needed in the healthcare setting. And each has specific characteristics that they utilize to help the hospital grow and develop.” (CHHS2)

“The research paper was in different sections. We had the introduction and then the content review, the development of characteristics, the pedagogical decisions and then the conclusion. So it’s kind of split up into different parts.” (COE1)
Lab report/memo

“And what we did in the assignment, we just--it was kind of like a lab report, it was a memorandum and we wrote how it was helpful for us learning the material in the class, how it--what we did in it, how our results came out--like what was error and like all that.” (CEIT3)

Mathematics/calculation

“I have struggled a lot with the introduction and conclusion parts of the paper because I wasn’t quite sure of what to say there... The center part of the paper has a lot do with mathematical formulas; it’s basically centered around those formulas and your description of those formulas and that’s something you don’t do for other papers or don’t have to do for other papers.” (COSM1)

WAC vs. lower-level ENGL assignments

“I feel like in a math assignment, you have to be much more specific with what you are saying versus in an English assignment there’s a lot of different ways that you can say something in English. But in math you have to be a lot more specific.” (COMS1)
• Definitions (QUAL)

➢ Consistent: researching, drafting, reflecting

“[Researching is] I would say gathering materials and data to further develop a uhm a topic.” (CEIT2)

“Putting it on paper or typing it like getting it out of your brain.” (COE3)

“I mean you could basically break it [reflecting] up into two parts. You could reflect before you got your paper--submitted your paper and also as well after you got your paper back from your professor. Beforehand, you could go back and look at it and think about the components you had maybe struggled with on previous papers that you had been graded down on, you know check over your rubric--go through everything make like a little checklist. Then when you get your paper back, you can look at what the professor’s comments were on it. Usually Dr. ... had very helpful comments on his. You could go back and look at where you messed up and look at how you could improve your next paper.” (CEIT5)
Inconsistent: revising & editing, collaborating

“I guess revising would be more of some changes in the content or the structure of the paper and editing is like looking for the small final details like spacing, incorrect tense, punctuation marks.” (COE2)

“I would think revising and editing would be similar – like when I revise, I edit at the same time, like it’s the same process.” (COE1)

“Every now and then I will ask a friend or someone you know to review my work to make sure my transitions are strong, that the flow is up to par for the college level.” (COPH2)

“I usually would have one of my fellow students read over the paper as well have my husband read over it and he doesn't understand any bit of what I'm writing. He's just there to make sure I'm not making silly grammar or punctuation mistake.” (COSM1)

“For the research paper we had to have peer reviewing, so we had like our classmates had to look at our paper and had to make sure our ideas were fundamental and that we were using correct grammar and things like that.” (COE3)
• Uses of writing processes (QUAN+QUAL)
  ➢ *Editing* in the high range \((M=5.2, SD=.99; M=5.1; SD=1.1)\)
  ➢ *Collaborating* in the low range \((M=3.99, SD=1.27; M=4.33; SD=1.3)\)
Commonly used: researching, drafting, revising & editing

“Definitely researching, I guess you don’t necessarily need collaboration but you have to research and draft.” (COE2)

“Definitely research, the draft, and revision. Because you know, word has this own thing where you can just spell check and then you can go in and spell check everything and grammar so I don’t really count that.” (COPH2)

Least used: collaborating and reflecting

“The reflection, yeah I’m not, I don’t reflect, I just, I’m confident. I’m confident in myself.” (COPH2)

“Typically I don’t collaborate with people until the very end when I have people edit and proof.” (CLASS1)
• Changes of writing processes (QUAN+QUAL)
  ➢ Collaborating $[t (3248) = 7.197, p < .01, d = .26]$
  ➢ Revising $[t (3243) = 7.457, p < .01, d = .25]$

➢ Increased collaboration and researching

“Probably the collaborating [I used more often], because I don’t really collaborate with anybody normally when I writing.” (CHHS1)

“As I said my collaboration had definitely gone up because the opportunity is present. Uhm as far as the rest of them, they really just fall in when I need to like I use them when needed.” (COPH1)

“I’ve definitely gotten better at researching the values that I need and like examples like trying to find them.” (CEIT3)
- **Impact on writing and learning (QUAN+QUAL)**

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Code 1: Negative</td>
<td>“no improvement”</td>
<td>2.9% (58)</td>
<td>3.2% (40)</td>
</tr>
<tr>
<td>Code 2: Minimal effect</td>
<td>“There is room for improvement”</td>
<td>5.5% (111)</td>
<td>2.9% (36)</td>
</tr>
<tr>
<td>Code 3: Positive—Improved quality</td>
<td>“ended up with a better assignment”</td>
<td>24.2% (487)</td>
<td>16.7% (208)</td>
</tr>
<tr>
<td>Code 4: Positive—Local issues</td>
<td>“grammar improvements”</td>
<td>18.5% (372)</td>
<td>14.5% (181)</td>
</tr>
<tr>
<td>Code 5: Positive—Global issues</td>
<td>“focused more on the topic rather than meeting a work count”</td>
<td>20.5% (414)</td>
<td>22.8% (284)</td>
</tr>
<tr>
<td>Code 6: Positive—Improved Grades</td>
<td>“better grades”</td>
<td>10.3% (208)</td>
<td>8.1% (101)</td>
</tr>
<tr>
<td>Code 7: Positive—No explanation</td>
<td>“I have been successful”</td>
<td>12.2% (246)</td>
<td>13.7% (171)</td>
</tr>
<tr>
<td>Code 8: Positive—Affective dispositions</td>
<td>“getting outside opinion important”</td>
<td>7.8% (157)</td>
<td>6.7% (84)</td>
</tr>
</tbody>
</table>
Global/content

“My writing seems to be more thought out and organized...very much more thought out than it was and not just a bunch of information put on a paper.” (CLASS2)

“I definitely think it helps you better present the information that you want to. Because sometimes it’s clear, may seem like clear in your head, but if you go through those steps, have people read it, receive that criticism, you can make it better, more understandable to other people, more coherent and focused.” (COE2)

Local

“Improve as far as my word choice... Dr. .. says sometimes we use terms to try to make us sound more smart, just so we appear more smart in the paper, so as far as like using words that is understood but not like but not like too high education where it’s like “okay, I know you didn’t write this” like I would use mediocre words, above average words so that’s why my word choice is one of them.” (COPH1)
Affective disposition

“When I first started, I probably would have put writing the paper off to the last night before it was due. Now I like to start at least two weeks ahead of time, if not more.” (COSM1)

“I am more confident in my writing because like I, I’m the type of person to write like I speak like before like whatever I’m thinking of saying like that’s how I’m writing it like you know it was me writing but now my writing I don’t wanna to say sound more professional, but it sound better it’s like a college student wrote it, not just a little girl playing on the computer.” (COPH1)

Changes of impact

“Maybe slightly, especially looking at the engineering standpoint of it just coming back, just the change of subject matter, uhm there’s a lot of things that you have to go back and you know re-look at, there’s a lot of different kind of figures, a lot of different graphs, different calculations that you have to show and explain.” (CEIT5)
Discussion

• Skill transfer in WAC assignments

• Convergence
  ➢ Uses of writing processes
  ➢ Impact on writing and learning

• Divergence
  ➢ Revising & editing
  ➢ Collaborating
  ➢ The use of reflecting


