

FEEL, THINK, ACT: EXPLORING THE QUESTION-ASKING BEHAVIOUR OF ARCHITECTURE STUDENTS DURING CREATIVE DESIGN PROJECTS

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WE HAVE ALL EXPERIENCED THE ENDLESS...

Why is the sky blue?

Why can't I get a puppy?

Why is water wet?

Why do I have to go to school?

Why do zebras have stripes?

Why?

Why Not?

Why?

Why Not?

Why is the sun so hot?

Why do people get sick?

Why is the snow white?

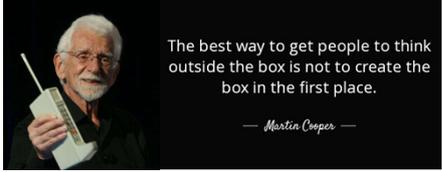
Can humans fly? ... Why not?

Why don't we have dinosaurs anymore?

ALL THE GREAT INVENTORS, DESIGNERS AND SCIENTISTS ASKED QUESTIONS...



“Why did the apple fall from the tree?”
(Isaac Newton, 1660s)



The best way to get people to think outside the box is not to create the box in the first place.
— Martin Cooper —

“Why is it that when we want to talk to someone, we have to call a place?”
(Martin Cooper, 1973)

“Why is my peanut butter candy bar melting in my pocket?” (Percy Spencer, 1945)





What if I could paint over my mistakes when typing, the way I do when painting?
(Bette Nesmith Graham, 1950s)



intro

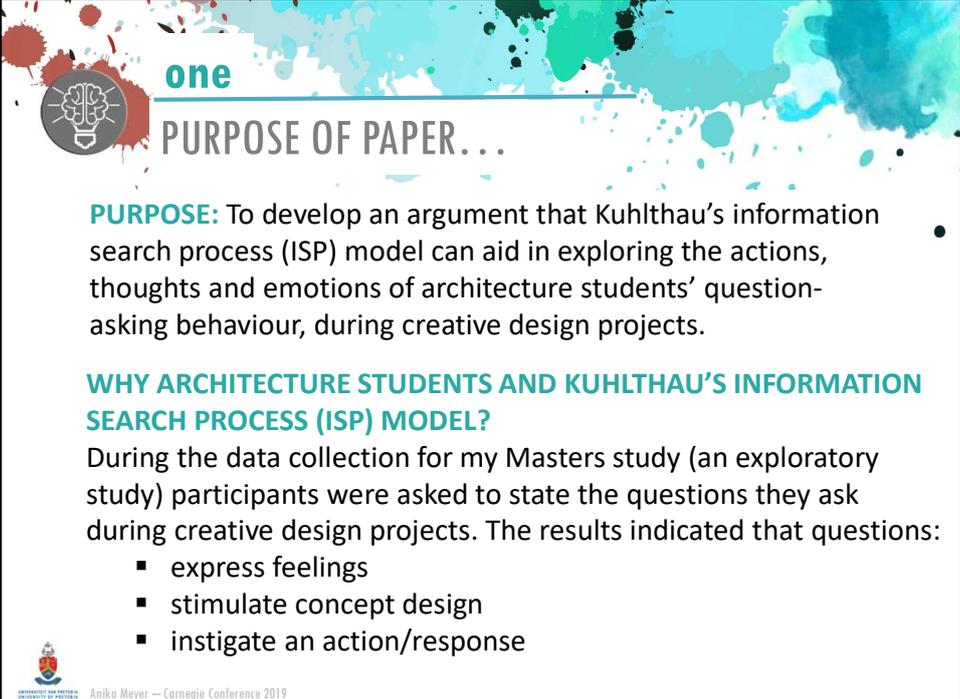
GUESS WHAT?

QUESTIONING CREATURES

“There are known knowns. These are things we know that we know. There are known unknowns. That is to say, there are things that we know we don't know. But there are also unknown unknowns. There are things we don't know we don't know”
(Rumsfeld, 2002).

- It is human nature to ask – **understand** (think) and **seek** (act) explanatory truth.
- We as human beings **feel** (emotion) uncomfortable not knowing, thus we transform into: **QUESTIONING CREATURES**

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one

PURPOSE OF PAPER...

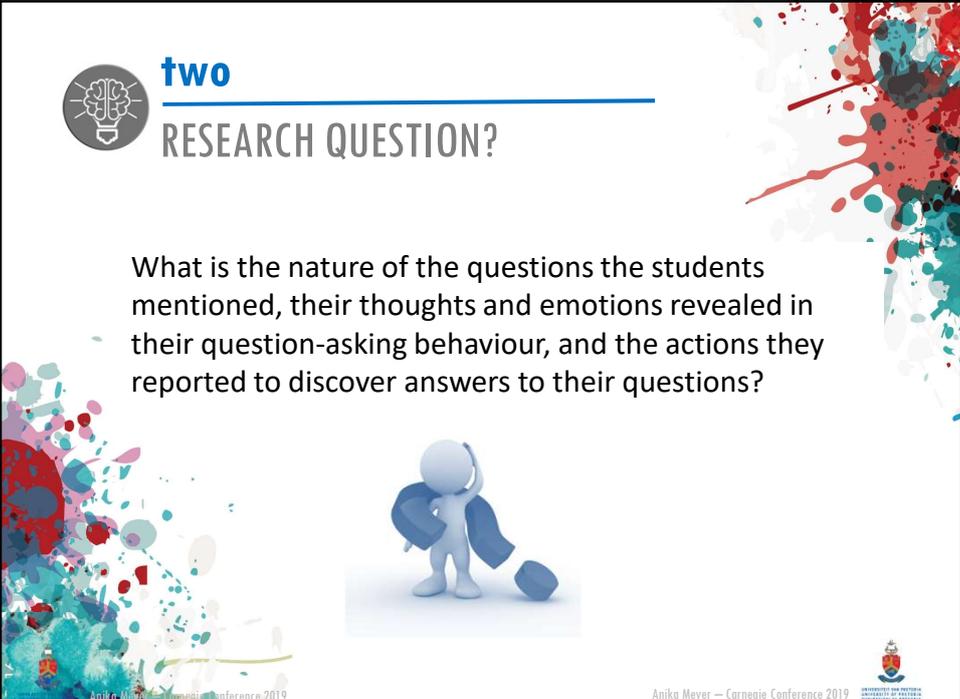
PURPOSE: To develop an argument that Kuhlthau's information search process (ISP) model can aid in exploring the actions, thoughts and emotions of architecture students' question-asking behaviour, during creative design projects.

WHY ARCHITECTURE STUDENTS AND KUHALTHAU'S INFORMATION SEARCH PROCESS (ISP) MODEL?

During the data collection for my Masters study (an exploratory study) participants were asked to state the questions they ask during creative design projects. The results indicated that questions:

- express feelings
- stimulate concept design
- instigate an action/response

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two

RESEARCH QUESTION?

What is the nature of the questions the students mentioned, their thoughts and emotions revealed in their question-asking behaviour, and the actions they reported to discover answers to their questions?



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 **three**
BACKGROUND

| | |
|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Research approach | Qualitative |
| Sample group and participants | (1) Acting head of department (2) Lecturer of Module Anonymous (3) Third-year architecture students |
| Methods of data collection | (1) Semi-structured online profile questionnaire (Only Architecture students) (2) Individual interview schedules (each group different) |
| Time period | October 2016 |
| Actual number of participants | 23/60 (38%) students completed the profile questionnaire 19/60 (32%) students took part in the individual interviews |
| Ethical clearance | Permission obtained from all relevant parties |
| Confidentiality, reliability and validity | Pseudonyms, triangulation and pilot-testing instruments |



five 

WHY KUHLTHUA'S ISP MODEL?

| Model of the Information Search Process | | | | | | | |
|-----------------------------------------|-------------|-----------------------|-----------------------------------|-------------|------------------------------------|-----------------------------------|---------------------------------|
| | Initiation | Selection | Exploration | Formulation | Collection | Presentation | Assessment |
| Feel (Affective) | Uncertainty | Optimism | Confusion Frustration Doubt | Clarity | Sense of direction / Confidence | Satisfaction or Disappointment | Sense of accomplishment |
| Think (Cognitive) | vague | → focused | | | | increased interest | Increased self- awareness |
| Act (Physical) | seeking | relevant Exploring | information | seeking | pertinent Documenting | information | |

Change in a student's knowledge construction of a curriculum related topic can influence their feelings (Kuhlthau, 1989).

From general background, to specific and more narrowed, to clearer and more focused (Kuhlthau, 1989).

"Action (and reaction) can be said to be determined by what a man knows" (Burner, 1979).

 **six**
RESULTS

| THOUGHTS | AFFECTIVE | ACTIONS |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> What's the problem? Why is it a problem? How can it be tackled? What do the people need? What am I designing, for who, where and why? What links are there to the surrounding context? What do I need to design? What materials am I using? How will my building fit into its unique site and context? How can I make it sustainable? What have I learned? How can I clarify my argument? | <ul style="list-style-type: none"> How am I going to finish this presentation? Will I not collapse due to lack of sleep? How am I going to pass? Why did I leave all this work 'til the end? Why didn't I just study Astrophysics like I originally planned? If I get hit by a car, do I still need to do all this work? Am I contradicting myself? Is the architecture "childish" enough? | <ul style="list-style-type: none"> What other solutions are there that have been implemented elsewhere – within architectural context – looking for physical evidence elsewhere? How have other architects tackled the same project? What is done in previous cases? Which precedents to look at, questions about the context, history of the site? |



seven

OVERLAP BETWEEN THE 3 REALMS OF EXPERIENCE

| THOUGHTS | AFFECTIVE | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|
| <ul style="list-style-type: none"> • Do we use the site as is, or do we demolish everything and start tabula plena? • Can anyone suffer from mental health? Should I worry about my mental health? (Answer: Of course you are studying architecture!) • How will I set my design and intent apart from my classmates who are perhaps thinking in the same direction at this point? | | |
| THOUGHTS | ACTIONS | |
| <ul style="list-style-type: none"> • What is happening on the site and around it? • How to present our theory as part of the presentation? • How will one move through the buildings and into them? | | |
| THOUGHTS | ACTIONS | AFFECTIVE |
| <p>(i) Start - What sociopolitical (spatial) statement do I want to make (comprehension)?</p> <p>(ii) During - What media, information and knowledge can I use; what is the link - how can it be spatial (resource acquisition and identification)?</p> <p>(iii) End - Project not complete yet... (anxiety, uncertainty and fear)</p> | | |



eight

FLOW BETWEEN THE 3 REALMS OF EXPERIENCE

THOUGHTS

What is happening...

↓

...on the site and around it?

↑

ACTIONS

THOUGHTS

How will I set my design and intent apart from my classmates...

↓

...who are perhaps thinking in the same direction at this point?

↑

AFFECTIVE

THOUGHTS

What sociopolitical statement do I want to make?

↓

What media, information and knowledge can I use?

↑

ACTIONS

Project not complete yet...

↑

AFFECTIVE

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conclusion

VALUE OF KUHLTUHA'S ISP MODEL

- Proximal development - zones of intervention for guidance.
- Uncertainty principle - the role that information intermediaries can play.
- Third space concept - shift between personal knowledgebase to curriculum knowledge construction.
- Reveals students' question-asking and "doing" behaviour.
- Indicate information support needed, information resources and services, systems, training, as well as, additional spaces for assistance and guidance during creative design projects.



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building blocks



FUTURE RESEARCH OPPORTUNITIES

- Exploring the value of autoethnographic research to reveal the individual and collective feelings, thoughts and actions of architecture students during the design process.
- Students must "learn to question" - integrating creative questioning activities.
- Investigate the intrinsic and extrinsic motives of students to ask questions during creative design projects.
- Examine the integration of various spaces (collaboration, reflective, social, virtual, etc.) to promote students to ask and answer questions.



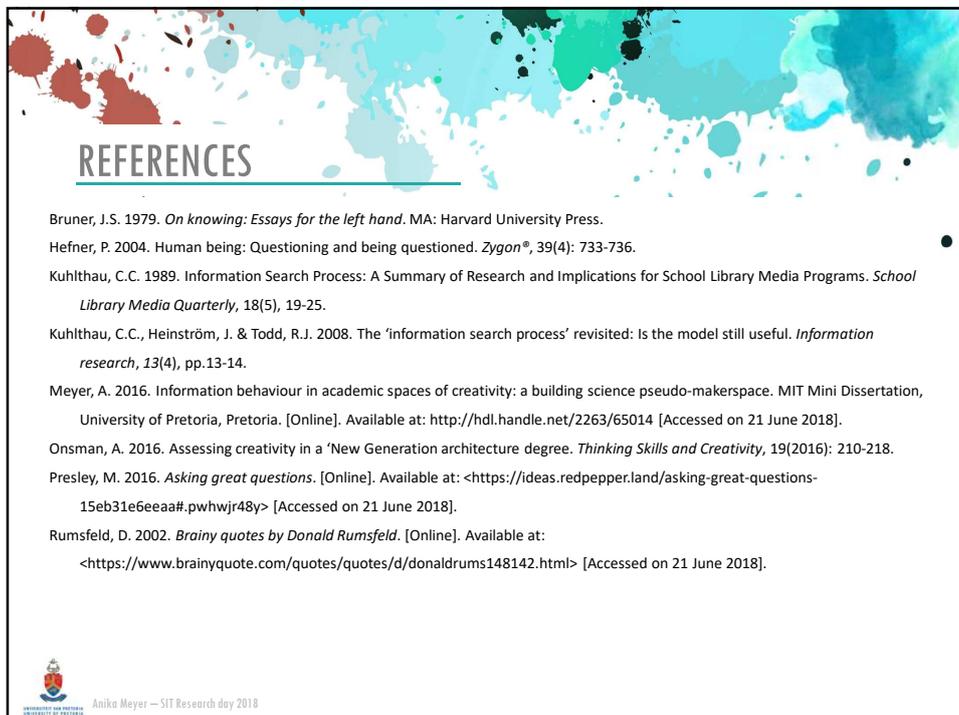
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THANK YOU - ANY QUESTIONS?

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 Anika Meyer — SIT Research day 2018